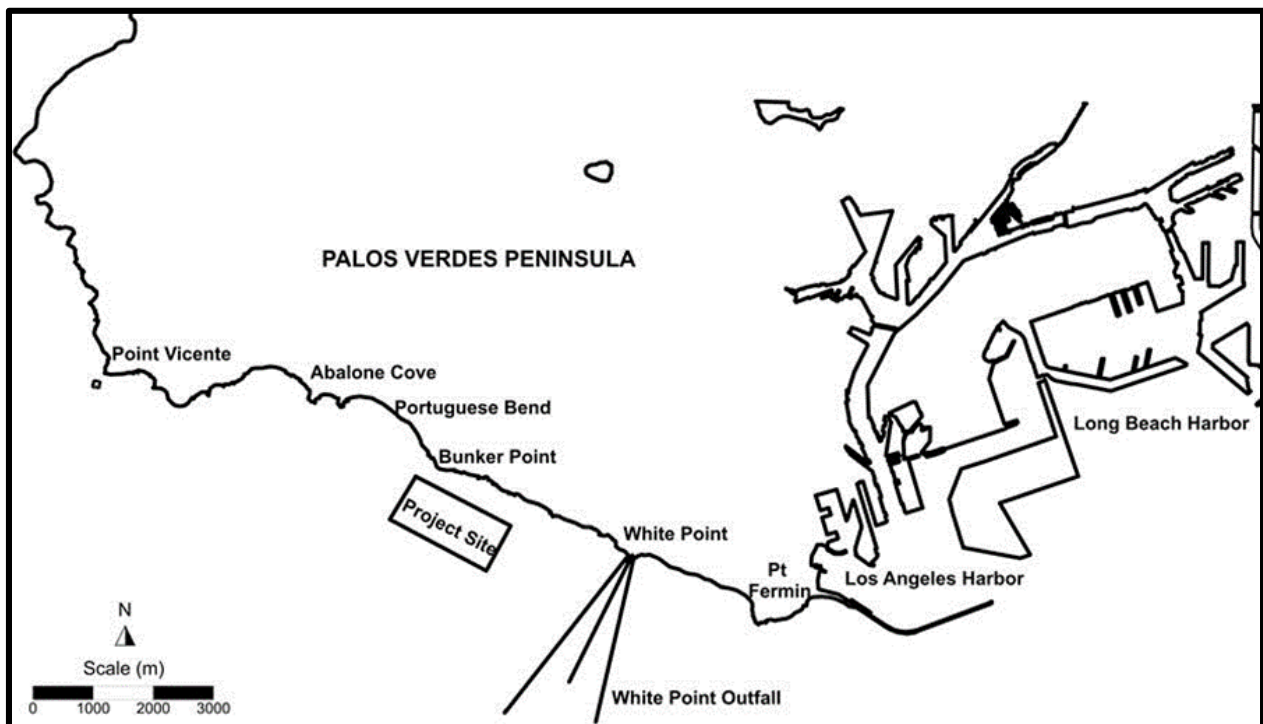


APPENDIX C

INITIAL STUDY AND ENVIRONMENTAL CHECKLIST FOR THE PALOS VERDES REEF RESTORATION PROJECT



Prepared by:
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

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MISSION STATEMENT

The California State Lands Commission provides the people of California with effective stewardship of the lands, waterways, and resources entrusted to its care through preservation, restoration, enhancement, responsible economic development, and the promotion of public access.

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INITIAL STUDY AND ENVIRONMENTAL CHECKLIST

This appendix contains the Initial Study (IS) that was prepared for the proposed Palos Verdes Reef Restoration Project (Project) in accordance with the requirements of the California Environmental Quality Act (CEQA). The National Oceanic and Atmospheric Administration (NOAA), the Project proponent, is the federal lead agency for the Project under the National Environmental Policy Act, and the California State Lands Commission (CSLC), as the land owner, is the state lead agency under CEQA. A Draft Environmental Assessment and Finding of No Significant Impact (DEA and FONSI) has been prepared by NOAA, and the CSLC intends to use the EA and FONSI as the CEQA-equivalent of a Negative Declaration (State CEQA Guidelines, § 15221).

The following IS identifies site-specific conditions and impacts, evaluates their potential significance, and discusses ways to avoid or lessen impacts that are potentially significant. The evaluation of environmental impacts provided in this IS is based in part on the impact questions contained in Appendix G of the State CEQA Guidelines; these questions, which are included under each environmental category (e.g., Aesthetics, Agriculture/Forest Resources, Air Quality, Biological Resources, etc.), are “intended to encourage thoughtful assessment of impacts.” Each question is followed by a check-marked box with column headings that are defined below.

- **Potentially Significant Impact.** This column is checked if there is substantial evidence that a Project-related environmental effect may be significant. If there are one or more “Potentially Significant Impacts,” an Environmental Impact Report would be prepared.
- **Less than Significant with Mitigation.** This column is checked when the Project may result in a significant environmental impact, but the incorporation of identified Project revisions or mitigation measures (MMs) would reduce the identified effect(s) to a less-than-significant level.
- **Less-than-Significant Impact.** This column is checked when the Project would not result in any significant effects. The Project’s impact is less than significant even without the incorporation of Project-specific MMs.
- **No Impact.** This column is checked when the Project would not result in any impact in the category or when the category does not apply.

None of the environmental factors below would be affected by this Project (all impacts are either “Less Than Significant” or there would be No Impact).

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forest Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources (Terrestrial and Marine)	<input type="checkbox"/> Cultural and Paleontological Resources	<input type="checkbox"/> Geology and Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards and Hazardous Materials	<input type="checkbox"/> Hydrology and Water Quality
<input type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise
<input type="checkbox"/> Population and Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input type="checkbox"/> Transportation/Traffic	<input type="checkbox"/> Tribal Cultural Resources	<input type="checkbox"/> Utilities and Service Systems

<input type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Other Major Areas of Concern: Commercial and Recreational Fishing
<input type="checkbox"/> Other Major Areas of Concern: Environmental Justice

1 A detailed Project description can be found in Chapters 1 and 2 of the DEA. Detailed descriptions
2 and analyses of impacts from Project activities and the basis for their significance determinations
3 are provided for each environmental factor on the following pages, beginning with Section 1.0,
4 Aesthetics. Attachment 1 identifies federal and state laws and regulations pertaining to the various
5 environmental categories and relevant to the Project. Local plans, goals, and policies applicable to
6 the Project are listed in the Regulatory Setting for each environmental factor analyzed in this IS.

7 **AGENCY DETERMINATION**

8 Based on the environmental impact analysis provided by this Initial Study:

- ☒ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Signature

Kelly Keen, Environmental Scientist
California State Lands Commission

2/21/2017

Date

1.0 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1.1 Environmental Setting

The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula in Los Angeles County. Inshore of the Project site is the City of Rancho Palos Verdes, which includes numerous recreational facilities that use the visual character of the area, as well as scenic roadways, viewing stations, and residential communities. Additionally, this area is near the Ports of Los Angeles and Long Beach.

1.1.1 Recreational Facilities

Open spaces for recreation within the Project vicinity include: (1) Abalone Cove Shoreline Park; (2) Ocean Trails Reserve; (3) Trump National Golf Club; (4) Royal Palms/White Point County Beach; (5) White Point Nature Reserve; (6) Point Fermin Park; and (7) Angels Gate Park.

1.1.2 Scenic Roadways

There are no State Scenic Highways in the City of Rancho Palos Verdes; however, Palos Verdes Drive East, which has a distant view of the Project site, is a locally-designated scenic roadway in the City (City of Rancho Palos Verdes 2013a), and travelers on this roadway are considered sensitive to activities in the Project area.

1.1.3 Viewing Stations

The City of Rancho Palos Verdes General Plan–Visual Resources Element (2013a) identifies two types of viewing stations, viewing points and viewing sites, where people can enjoy the City's visual resources. Viewing points are locations at private residences and roadway turnouts along vehicular corridors that allow for the viewing of visual resources. Roadway turnouts with viewing points of the Project area include: Terranea Resort; Abalone Cove; Hawthorne Boulevard; and Trump National Golf Club. Viewing sites are larger areas that provide significant vantage points. Viewing sites within view of the Project include: Upper Point Vicente; Terranea Estates public trails; Trump National Golf Club public trails; and Ocean Trails Reserve.

1.1.4 Residential Communities near the Project Site

One-third of the total land in Rancho Palos Verdes is vacant, with more than three-fourths of the immediate coastline vacant (City of Rancho Palos Verdes 2013a). The closest residential communities to the Project site are located approximately 0.4 mile northeast of the site in Rancho Palos Verdes and approximately 0.6 mile inshore of the site, across the street from Palos Verdes Drive South. Because the latter community is located on a hill, residents would likely be able to view the Project site.

1.1.5 Harbors near the Project Site

The Ports of Los Angeles and Long Beach are located approximately 8 nautical miles (nm) from the Project site. Together, these ports handle over 4,000 commercial vessel calls per year (Port of Los Angeles 2014; CBRE Research 2015) and include 19 marinas with a total of 7,665 boat slips. Most of the area in the immediate Project vicinity is navigated by small recreational craft, sport-fishing excursions, and seasonally by lobster boats. Additionally, approximately 3 nm offshore of the Palos Verdes Peninsula are the western and northern routes of the shipping lanes, in which large commercial vessels travel to and from the Ports of Los Angeles and Long Beach.

1.2 Regulatory Setting

Federal and state laws and regulations pertaining to aesthetics and relevant to the Project are identified in Attachment 1. At the local level, the City of Rancho Palos Verdes General Plan–Visual Resources Element (2013a) includes a goal and policies that may be relevant to the Project:

- Goal: It shall be the goal of the City to preserve these views and vistas for the public benefit and, where appropriate, the City should strive to enhance and restore these resources, the visual character of the City, and provide and maintain access for the benefit and enjoyment of the public.
- Policy 1: Develop controls to preserve existing significant visual aspects from future disruption or degradation.
- Policy 2: Enhance views and vistas where appropriate.
- Policy 3: Preserve and enhance existing positive visual elements, while restoring those that have been lost.

1.3 Impact Analysis

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The Project would create short-term, temporary visual impacts associated with construction of the rocky reef; however, after the submerged reef is constructed, no scenic vistas would be affected. Construction of the reef would take place over a 40- to 60-day period, with construction paced at 1 acre per day, to place quarry rock on 40 acres within the 69-

1 acre Project site. During Project construction, several water craft (including a tugboat, barges, and
2 small boats) would be visible from the shoreline. Such small-scale construction activity is common
3 along the California coastline, and the occasional and temporary offshore presence of tugboats,
4 barges, and other vessels and equipment are familiar sights to coastal residents and visitors who
5 use the beaches and coastal zone for recreation. As described in Chapter 8 of the DEA, a planned
6 public outreach program is scheduled to occur prior to construction to explain the purpose of the
7 Project, as well as the timing and limited duration of construction. Because the only visual impacts
8 associated with the Project would be during construction, which would be short-term and
9 temporary, the Project would have a less than significant impact on scenic vistas.

10 ***b) Substantially damage scenic resources, including, but not limited to, trees, rock***
11 ***outcroppings, and historic buildings within a state scenic highway?***

12 **No Impact.** The Project site is not within view of a State Scenic Highway; therefore, there would
13 be no impacts to scenic resources within a State Scenic Highway.

14 ***c) Substantially degrade the existing visual character or quality of the site and its***
15 ***surroundings?***

16 **Less Than Significant Impact.** See answers to *a)* and *b)* above.

17 ***d) Create a new source of substantial light or glare which would adversely affect day or***
18 ***nighttime views in the area?***

19 **Less Than Significant Impact.** Construction would take place during daylight hours when any
20 light generated by Project activities would be diminished by natural light, and any glare produced
21 would be no more severe than glare generated by activities already occurring daily in nearshore
22 waters. The transportation of quarry rock to and from the quarries on Santa Catalina Island and the
23 Project site may occur at night. As a result, nighttime lighting would be required, but would be
24 limited to safety-required navigation lighting. Safety-related lighting is a typical sight along the
25 California coastline and is designed to be as unobtrusive as possible; therefore, it is considered to
26 be neither a substantial nor new source of light. Because the completed reef would be entirely
27 submerged with no lights or structures, there would be no potential for light or glare. Since any
28 light or glare effects during construction and transportation of the quarry rock would be short term
29 and temporary, the Project would have a less than significant impact on day or nighttime views in
30 the area.

31 **1.4 Mitigation Summary**

32 The Project would not result in significant impacts to aesthetics; therefore, no mitigation is
33 required.

2.0 AGRICULTURE AND FOREST RESOURCES

Would the Project ¹ :	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub. Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, § 4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd. (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.1 Environmental Setting

The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula in Los Angeles County. No agricultural or forest resources are present offshore.

2.2 Regulatory Setting

No federal, state, or local laws relevant to agriculture and forest resources are applicable.

2.3 Impact Analysis

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Natural Resources Agency, to non-agricultural use?

¹ In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

- 1 *b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?*
2 *c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Pub.*
3 *Resources Code, § 12220, subd. (g)), timberland (as defined by Pub. Resources Code, §*
4 *4526), or timberland zoned Timberland Production (as defined by Gov. Code, § 51104, subd.*
5 *(g))?*
6 *d) Result in the loss of forest land or conversion of forest land to non-forest use?*
7 *e) Involve other changes in the existing environment which, due to their location or nature,*
8 *could result in conversion of Farmland, to non-agricultural use or conversion of forest land*
9 *to non-forest use?*

10 **a) through e) No Impact.** There are no farm lands or forest lands located in the vicinity of the
11 Project site, which is located 0.3 mile offshore; therefore, there would be no impact.

12 **2.4 Mitigation Summary**

13 The Project would have no impacts to agriculture and forest resources; therefore, no mitigation is
14 required.

1 3.0 AIR QUALITY

Would the Project ² :	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 3.1 Environmental Setting

3 3.1.1 Topography, Climate, and Meteorology

4 The Project is located within the South Coast Air Basin (SCAB), as well as the Southern California
5 Bight climatological sub-region, which is characterized by a subtropical climate, with
6 Mediterranean-type dry summers and short, mild winters. A series of mountain ranges and coastal
7 plains border the SCAB. The Transverse Ranges are a series of east-west trending mountain ranges
8 and include the Santa Monica, San Gabriel, and San Bernardino mountain ranges, which together
9 delineate the northern boundary of the SCAB. The southeastern portion of the SCAB is bounded
10 by the north-northwest trending Peninsular Ranges, which include the Santa Ana and Cuyamaca
11 mountains. Winds are predominantly onshore throughout the year, with northwesterly winds
12 during the summer and southeasterly winds during the winter. While winds typically disperse and
13 dilute air pollutants, the combination of natural barriers such as mountain ranges, onshore winds,
14 and temperature inversions within the SCAB, concentrate noxious pollutants on the coastal side of
15 these ranges, resulting in deleterious air quality. A contrary wind condition, referred to as a “Santa
16 Ana” (short for “Santa Ana winds”), occurs when a high-pressure cell over the Great Basin results
17 in the reversal of the prevailing onshore winds. Within the SCAB, Santa Ana winds transport
18 pollutants offshore; however, these southwesterly winds can also redistribute air pollutants to other
19 air basins, such as the San Diego Air Basin.

² Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

3.1.2 Air Pollutants

Air quality is measured as the relative degradation of ambient air quality standards, which are set by state and federal agencies. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. The National Ambient Air Quality Standards represent the maximum acceptable concentrations that may not be exceeded more than once per year, with the exception of the annual standards, which may never be exceeded. The California Ambient Air Quality Standards represent the maximum acceptable pollutant concentrations that are not to be equaled or exceeded, as established by the California Air Resources Board (CARB).

Criteria air pollutants are defined as those for which a state or federal ambient air quality standard has been established to protect public health (see Table 5-5 in the DEA). These include nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), volatile organic compounds (VOCs)/reactive organic compounds (ROCs), and particulate matter less than or equal to 10 microns in diameter (PM₁₀). Nitrogen oxides and VOCs/ROCs interact in the presence of solar radiation to form secondary pollutants such as ozone.

Air pollutants are broken down into primary and secondary sources. Primary pollutants are derived directly from a point source into the atmosphere. Secondary pollutants are derived from primary pollutants and are produced through chemical reactions and phase transformations that occur in the atmosphere. Air pollutants are expressed in concentrations, either parts per million (ppm) or micrograms per cubic meter (µg/m³), which are averaged over a given sampling period. For more information regarding primary and secondary pollutants, see Section 5.4, Air Quality, of the DEA.

While air quality has improved in recent years in the SCAB, this basin exceeds standards for one or more air pollutants. State law requires CARB to designate each area as attainment, nonattainment, or unclassified for each State standard. If the hourly ppm levels for individual criteria pollutants exceed State or Federal standards, the area is considered to be in nonattainment. Tables 2-2 and 2-3 of the DEA present the attainment status of criteria pollutants in the SCAB and the number of days and hourly ppm concentration thresholds in the SCAB, respectively.

3.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to air quality and the Project are identified in Attachment 1. At the local level, the South Coast Air Quality Management District (SCAQMD) has regulatory jurisdiction over stationary sources of air emissions within the SCAB, and ensures compliance with state and federal air pollution control requirements. Mobile sources, such as transportation vehicles and mobile construction equipment, are regulated by the air districts only where these sources are operated as stationary sources. Stationary sources of air emissions for the Project include idling tugboats and the equipment used during loading and offloading of the barges. Mobile sources of air emissions for the Project, which are not regulated by the SCAQMD, include the trucks used to haul the quarry rock and the tugboats underway to and from

the Project site. NOAA consulted with SCAQMD staff in evaluating potential Project emissions and relevant permitting processes and requirements, and the SCAQMD determined that no permits are required for the Project. Nevertheless, the DEA and this appendix include an evaluation of the emissions from both stationary and mobile sources, along with measures to reduce the emissions.

3.3 Impact Analysis

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. Emissions would be produced during the construction phase of the Project; however, no emissions would be generated when the rocky reef is complete. The construction of the rocky reef would include emissions from tugboats, barges, and other equipment (e.g., crane, off-loading bulldozer) used to transport the quarry rock and place it on the seafloor. NOAA calculated the expected construction-related emissions, evaluated the emissions in relation to the Federal Clean Air Act and the more stringent SCAQMD significance criteria, and consulted with SCAQMD staff on the results of the analyses. All construction-related emissions, discussed in *b)* below, were below the daily and quarterly emission significance thresholds established by the SCAQMD (see Section 6.2, Air Quality, in the DEA). For these reasons, the Project was determined to be consistent with applicable air quality plans and policies; therefore, there would be no impact.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact. Emissions would be produced during the construction phase of the Project; however, no emissions would be generated when the rocky reef is complete. Table C-1 provides a description of the individual Project-related activities that were included in the air emission analysis. Emissions would also be associated with the excavation and transport of rock from the quarries on Santa Catalina Island, which have direct marine access to the transport barges at the marina on Catalina Island; however, because the quarry owner (Connolly-Pacific Company) is operating under current permits, air emissions associated with this phase of the Project are not included in the following air emissions evaluation.

As described in in Section 3.2, Regulatory Setting, above, the SCAQMD regulates air emissions from stationary sources within the SCAB. The SCAQMD has published emission thresholds as guidelines for determining whether a project would have a significant impact on air quality under CEQA. The thresholds are expressed in terms of daily and quarterly levels of emissions, and are provided for the construction and operations phases of the Project. The period for estimating quarterly emissions is 78 days long given a 6-day work week. The Project would only generate potentially significant emissions during construction; consequently, only construction-related emissions and significance thresholds are considered in this analysis. The daily and quarterly significance thresholds for construction-related emissions adopted by the SCAQMD are listed below in Table C-2.

1

Table C-1. Project-Related Activities in Air Emissions Analysis

Project-Related Activities	Description
Quarry Rock Transport by Tugboat	A total of 70,000 tons of quarry rock would be transported by tugboat from the Pebbly Beach and Empire Quarries on Santa Catalina Island to the Project site. This would require 18 trips towing loaded supply barges to the Project site and 18 trips returning to the quarries without towing barges, or towing empty barges, for a total of 36 trips. The distance from the quarries to the Project site is approximately 26 nm, and would take an estimated 6 hours each way. The tugboat would make only one trip per day; thus, 6 hours per day are used to calculate daily tugboat emissions for the transport tugboat.
Offloading of Quarry Rock	Emissions for the offloading of quarry rock for reef placement are split into two construction elements: (1) derrick barge emissions, and (2) front loader emissions. The emission figures for this construction component assume a range of 2 to 8 hours of equipment usage (depending on the equipment type) for daily emissions and 60 days of construction for quarterly emissions. Construction operations producing emissions on the derrick barge include the use of: (1) generators for the mooring winches (estimated 8 hours/day usage); (2) the derrick crane to move the front loader from the derrick barge to the supply barge (estimated 2 hours/day usage); and (3) the attending tug to position the supply barge to the derrick barge (estimated 2 hours/day usage).
Transport of Crew by Crew Boat	Crew members would be transported from the harbor to the Project site daily by a 300-horsepower diesel-powered crew boat. This vessel would, on average, make one roundtrip per day (15 miles), which would consume approximately 50 gallons of fuel.
Workers Commuting	An estimated 15 crew members would be needed for reef construction. Daily emissions are calculated for 15 crew members driving an average of 25 miles roundtrip. Quarterly emissions are calculated for 15 crew members driving an average of 25 miles roundtrip over a 60-day period.
Auxiliary Generators	Auxiliary generators onboard each tug boat may be used when the tug boat is not actively engaged in activities. Because two tug boats would be used for the Project, daily emissions for one auxiliary generator are estimated on a 24-hour-per-day usage. Quarterly emissions are based on a 60-day construction period.

2 **Table C-2. SCAQMD Construction-Related Emission Thresholds for Criteria Pollutants**

Pollutant	Maximum Daily Emissions (pounds/day)	Maximum Quarterly Emissions (pounds/quarter)
Nitrogen oxides (NO _x)	100	5,000
Reactive organic compounds/volatile organic compounds (ROC/VOC)	75	5,000
Particulate matter less than 10 micrometers (PM ₁₀)	150	13,500
Particulate matter less than 2.5 micrometers (PM _{2.5})	55	-
Sulfur Oxides (SO _x)	150	13,500
Carbon monoxide (CO)	550	49,500
Lead (Pb)	3	-

Note: ¹ SO_x are compounds of sulfur and oxygen molecules. Sulfur dioxide (SO₂) is the predominant form found in the lower atmosphere.

Estimated daily and quarterly emissions of criteria pollutants for the Project are presented in Table C-3. Construction is estimated to take up to 60 days, with 18 roundtrips (36 one-way trips total) by tugboat to transport all the reef material to the site. Quarterly emissions are estimated by multiplying daily emissions by 36 days for the quarry rock transport and by 60 days for the remainder of the construction components. Since the Project would be constructed within a single quarter, the quarterly emissions are the same as the total emissions.

Table C-3. Total Daily and Quarterly Emissions for Criteria Air Pollutants

Pollutant	Daily Emissions ¹ (pounds/day)	Quarterly Emissions ² (pounds/quarter)
Carbon monoxide (CO)	63.66	2,984.88
Reactive organic compounds/volatile organic compounds (ROC/VOC)	10.28	495.44
Nitrogen oxides (NO _x)	95.19	4,628.29
Sulfur Oxides (SO _x)	3.94	146.69
Particulate matter less than 10 micrometers (PM ₁₀)	3.11	152.89
Particulate matter less than 2.5 micrometers (PM _{2.5}) ³	2.92	144.724

Source: Coastal Environments (2014a).

Notes:

¹ Daily emissions include barge loading, workers commuting, tugboat/barge shipping, and material off-loading at the Project site.

² Total of 60 days of reef construction, all in one quarter, with some proponents of construction occurring over 36 days. Quarterly numbers were computed by adding quarterly emissions estimates for individual components.

³ PM_{2.5} estimates were calculated by using updated CEIDARS table with PM_{2.5} fractions.

As presented in Table C-3, the total daily and quarterly emissions for CO, ROC, SO_x, PM₁₀, and PM_{2.5} are well below the thresholds of significance presented in Table C-2. Daily and quarterly emissions for NO_x, 95 pounds/day and 4,628 pounds/quarter, also do not exceed the thresholds for this pollutant. Thus, the Project would not violate air quality standards or contribute substantially to an existing or projected air quality violation, and the impact would be less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. See answers to *a)* and *b)* above. Further, the Project's incremental contribution of emissions would not be cumulatively considerable as it would not hinder progress towards attainment of state and federal ambient air quality standards. Project construction is temporary, and its offshore location would allow for adequate dispersion of pollutants and prevent accumulation of emissions. As a result, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state air quality standard. Therefore, this impact would be less than significant.

1 *d) Expose sensitive receptors to substantial pollutant concentrations?*

2 **Less Than Significant Impact.** See answers to *a)* and *b)* above. With regard to air pollutant
3 impacts, sensitive receptors are defined as people that have an increased sensitivity to air pollution
4 or environmental contaminants. Sensitive receptor locations include schools, parks and
5 playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. Sensitive
6 receptors are not anticipated to be exposed to substantial pollutant concentrations due to the
7 temporary nature of construction activities, as well as the Project's offshore location, which would
8 allow for adequate dispersion of pollutants and prevent accumulation of emissions. As a result, the
9 Project is unlikely to expose sensitive receptors to substantial pollutant concentrations. Therefore,
10 this impact would be less than significant.

11 *e) Create objectionable odors affecting a substantial number of people?*

12 **Less Than Significant Impact.** The exhaust of diesel-powered vessels and equipment may be
13 considered an objectionable odor; however, due to the offshore location of the Project, these odors
14 would be highly dispersed prior to reaching shore and, therefore, would not be considered a
15 nuisance. In addition, there would be no solid waste or wastewater generated by the Project, either
16 during construction or after it is complete, that would create objectionable odors. As a result, the
17 Project is unlikely to create objectionable odors affecting a substantial number of people.
18 Therefore, this impact would be less than significant.

19 **3.4 Mitigation Summary**

20 The Project would not result in significant impacts to air quality; therefore, no mitigation is
21 required.

1 4.0 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 4.1 Environmental Setting

3 The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos
4 Verdes Peninsula in Los Angeles County. The Project site is in the region called the Southern
5 California Bight (SCB), which includes the coastal area of southern California from Point
6 Conception to the United States/Mexico border and offshore to the Channel Islands.

7 The SCB contains many unique biological and physical characteristics. Biologically, this area is
8 the transition zone between northern marine populations to more temperate marine species, with
9 87 percent of California fish species found in this region. Physically, water temperatures are
10 generally warmer and more consistent than in areas north and south of the SCB and wind speeds
11 in the area are much lower than on other parts of the California coast (Gelpi and Norris 2008). This
12 is a region of highly productive and valuable biological environments, particularly in the nearshore
13 region; however, many of the biological environments in this area have been negatively affected
14 by sedimentation and turbidity from nonpoint source pollution, reef burial from landslides,

decimation of kelp beds from sea urchins, sediment contamination from sewage effluent from the nearby Joint Water Pollution Control Plant's White Point Outfall, and other impacts.

4.1.1 Soft-Bottom Habitat

Soft-bottom habitats are the largest type of community in the SCB, typifying the majority of sea bottom habitat types in water depths greater than 20 meter (m) (EPA 2003; Allen et al. 2011), and consist of sand or sand interspersed between boulders, rocks, and cobbles. The most common type of marine species found in this subtidal soft-bottom habitat are bottom-feeding (benthic) fish and infaunal and epifaunal invertebrates (EPA 2003; Allen et al. 2011). This habitat also contains plankton suspended in the water column as well as some algal species.

Because of their low productivity, subtidal soft-bottom communities are often considered to be less important than more productive rocky reef environments, which promote increased species richness and biological productivity. Subtidal soft-bottom environments provide habitat for sanddollars (*Dendraster* spp.), sand stars (*Astropecten* spp. and *Luidia* spp.), and sea pens (*Stylatula* spp.), as well as many species of polychaetes, crustaceans, gastropods, rays, and flat fishes. Subtidal soft-bottom environments are also economically important to nearshore fisheries, which trawl for white croaker (*Genyonemus lineatus*) and various flatfish.

4.1.2 Hard-Bottom Habitat

Hard-bottom substrate in the shallow (less than 30 m) depth range in the SCB generally consists of cobble (low-relief substrate), bench rock (high-relief substrate), or more commonly, a combination of the two (Dailey et al. 1994). Hard-bottom habitats are generally a limiting habitat type in the SCB, comprising approximately 25 percent of the nearshore environment in the Palos Verdes area (Pondella 2009). Within the boundaries of the Project site (15 to 20 m depth range), much of the reef has been impacted by sedimentation, mostly due to landslides (Pondella et al. 2012). A review of side-scan sonar data collected by EcoSystems Management Associates (2014) within the boundaries of the Project site identified approximately 9 acres of substantial hard substrate that could be considered biologically important habitat. The remaining area (approximately 60 acres) contains predominantly buried-reef habitat covered by a thin veneer of sand less than 1 m thick. A diver ground-truthing survey conducted at the Project site in April 2014 indicated the presence of gorgonians, algae, and sea urchins in the areas with hard substrate. Giant kelp (*Macrocystis pyrifera*) was largely absent (Coastal Environments 2014b).

Hard-bottom habitats provide substrate for the attachment of algae and sessile organisms and community structure for mobile organisms, such as macroinvertebrates and fish (Schiff et al. 2000). Within hard-bottom habitat, giant kelp is an important ecological and economic resource because of the array of benefits it provides. Kelp beds provide critical habitat for marine life and contribute substantially to the primary productivity of coastal waters (Foster and Schiel 1985). Economically, kelp forests support the production of many commercially important species and attract recreational divers and fishermen (Wilson et al. 1990; Foster and Schiel 1985). Kelp is also

1 harvested commercially for alginate production, which is an emulsifying and binding agent used
2 in the pharmaceutical and food industries (Foster and Schiel 1985).

3 4.1.3 Biological Survey

4 A biological survey of the Project site was conducted between January and February 2015 to assess
5 the invertebrate, algal, and fish species present at the Project site. In order to sample for fish
6 densities and species diversity, divers counted fish and estimated total fish length for all fish
7 encountered along 26 underwater transects (30 m by 2 m); macroinvertebrates were counted by
8 targeting individual invertebrates along these transects (swath method).

9 Invertebrate Community

10 Common members of the invertebrate community associated with the kelp beds include three
11 species of sea urchins that graze on kelp: (1) the purple urchin (*Strongylocentrotus purpuratus*),
12 (2) the red urchin (*Strongylocentrotus franciscanus*), and (3) the white urchin (*Lytechinus*
13 *anamesus*). Other species in the invertebrate community include various polychaetes, bivalves, sea
14 stars, sea cucumbers, brittle stars, cnidarians (e.g., anemones and sea fans), and crustaceans. At
15 the Project site, 33 species of macroinvertebrates were observed during the 2015 biological survey.
16 Of these 33 species, the predominant macroinvertebrate, making up almost 60 percent of the total
17 number of invertebrates, was the gorgonian, *Muricea californica*. Although *Muricea* spp. is native,
18 it is often considered invasive on shallow reefs in southern California. This is because it can occur
19 in high densities and exclude kelp, understory algae, and other sessile invertebrates. The next most
20 abundant macroinvertebrate was the orange puffball sponge (*Tethya californiana*), representing
21 13 percent of the total number of invertebrates.

22 Fish Community

23 While hard substrate areas are the least abundant habitat type in the region, they are one of the
24 most important for fish habitat. About 30 percent of the species and 40 percent of the families of
25 approximately 76 percent of transects were devoid of biota. Approximately 24 percent of transects
26 had hard substrate with biota; however, on these transects, gorgonians accounted for
27 approximately 80 percent of the coverage. At the Project site, 27 percent of transects had 0 to 10
28 percent biotic coverage; 12 percent had 10 to 20 percent biotic coverage; 23 percent had 20 to 30
29 percent biotic coverage; and 38 percent had greater than 30 percent biotic coverage. Areas with
30 high biotic coverage (greater than 20 percent) were generally found closer to the existing kelp bed
31 at Bunker Reef, while areas of low biotic coverage (less than 20 percent) were generally found
32 farther offshore, closer to the line of hard substrate.

33 4.1.4 Marine Mammals

34 The SCB contains one of the largest and most diverse assemblages of marine mammal populations
35 in the world. The coast of California supports a rich assemblage of marine mammals, including 27

species from the order Cetacea, six species from the sub-order Pinnipedia, and one species from the order Carnivora (Dailey et al. 1974). Marine mammals in the SCB can largely be categorized as pinnipeds and cetaceans. The most common marine mammals in the SCB are California sea lions (*Zalophus californianus*), harbor seals (*Phoca vitulina richardsi*), bottlenose dolphins (*Tursiops truncatus truncatus*), and gray whales (*Eschrichtius robustus*).

4.1.4 Sea Turtles

Five species of sea turtle have been observed in southern California waters. These are the leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), olive ridley sea turtle (*Lepidochelys olivacea*) and Pacific hawksbill sea turtle (*Eretmochelys imbricate*). There are no known nesting beaches for these species in the Project area, and sightings are extremely rare.

4.1.5 Marine Birds

More than 195 species of birds use coastal or offshore aquatic habitats in the SCB (Dailey et al. 1994). Pelagic birds are birds that are most often observed more than 1 kilometer (km) offshore and rarely use inland habitats. Shoreline bird species include those found within 1 km of the coast and use bays and harbors, and those found along beaches, rocky shores, or jetties. Some pelagic and shoreline birds that may occur in the Project area include the black storm petrel (*Oceanodroma melania*), double-crested cormorant (*Phalacrocorax auritus*), western snowy plover (*Charadrius alexandrinus nivosus*), California gull (*Larus californicus*), elegant tern (*Sterna elegans*), least tern (*Sterna antillarum browni*), and common loon (*Gavia immer*).

4.1.6 Federal- and State-Listed Species in the Project Area

Table C-4 lists the federally or state-designated endangered, threatened, or species of concern that may occur in the Project area.

Table C-4. Federal- and State-Listed Species that May Occur in the Project Area

	Common Name	Scientific Name	Status
Invertebrate	White abalone	<i>Haliotis sorenseni</i>	FE
Mammals	Sei whale	<i>Balaenoptera borealis</i>	FE
	Blue whale	<i>Balaenoptera musculus</i>	FE
	Fin whale	<i>Balaenoptera physalus</i>	FE
	Humpback whale	<i>Megaptera novaeangliae</i>	FE
	Right whale	<i>Eubalaena japonica</i>	FE
Reptiles	Green sea turtle	<i>Chelonia mydas</i>	FT
	Leatherback sea turtle	<i>Dermochelys coriacea</i>	FE
	Loggerhead sea turtle	<i>Caretta caretta</i>	FT
	Olive ridley sea turtle	<i>Lepidochelys olivacea</i>	FT
	Pacific hawksbill sea turtle	<i>Eretmochelys imbricata</i>	FE

	Common Name	Scientific Name	Status
Birds	Black storm petrel	<i>Oceanodroma melania</i>	CSC
	California gull	<i>Larus californicus</i>	CSC
	California least tern	<i>Sterna antillarum browni</i>	SE/FE
	Common loon	<i>Gavia immer</i>	CSC
	Double-crested cormorant	<i>Phalacrocorax auritus</i>	CSC
	Elegant tern	<i>Thalasseus elegans</i>	CSC/FSC
	Western snowy plover	<i>Charadrius lexandrinus nivosus</i>	CSC/FT

Acronyms: CSC = California Species of Concern; FE = Federally Endangered; FSC = Federal Species of Concern; FT = Federally Threatened; SE = State Endangered.

4.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to biological resources and the Project are identified in Attachment 1. At the local level, the City of Rancho Palos Verdes General Plan–Natural Environment Element (NEE) (1975) and Coastal Specific Plan (SP) (1978), including a chapter on Subregion 7 (where the Project is located), include the following policies that may be related to the Project:

- NEE Policy 8: Encourage establishment of the rocky intertidal areas as a marine reserve and strict enforcement be applied to all regulations concerning marine resources.
- SP (Subregion 7) Policy 3: Lend support wherever possible to organizations wishing to initiate or continue marine restorative efforts.
- SP Policy 10: Protect, enhance and encourage restoration of marine resources of the City through marine resource management and cooperation with other public agencies and private organizations.
- SP Policy 13: Encourage and support programs, policies and actions of other agencies designed to maintain, manage, and restore the ocean water quality.
- SP Policy 20: Encourage restoration efforts dealing with enhancing the marine environment from a biological standpoint.

4.3 Impact Analysis

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact. The Project would create 40 acres of rocky-reef habitat, in addition to the subsequent development of a 69-acre kelp forest, which would have beneficial effects on marine organisms, including native and resident migratory fish and wildlife species. The Project’s construction plan was designed and scaled to have minimal adverse effects on sensitive species that may occur in the Project area. For example, the construction footprint of the Project

would be localized (i.e., below the barge where quarry rock is being off-loaded), and the pace of construction would be about 1 acre per day. Due to the small construction footprint, the anticipated response to construction activities by mobile marine wildlife would be temporary avoidance and use of adjacent areas for predation, foraging, and migration. Because there are extensive alternative areas of suitable habitat available adjacent to the Project site, construction activities are expected to not have a substantial adverse effect on mobile species listed as candidate, sensitive, or special status species. Therefore, impacts to mobile species would be less than significant.

Less mobile and stationary organisms have the potential to be crushed or buried by quarry rock, buried by locally suspended sediments, or crushed by derrick barge anchors. These types of organisms are associated with rocky substrate, which comprises about 9 acres of the 69-acre Project site. Hard substrate areas at the Project site are degraded and low in biological diversity; however, hard-bottom substrate is biologically important. As a result of these potential impacts, the Project was designed to include measures to protect hard-bottom habitat in the Project area.

Quarry rock placement would avoid hard-bottom habitat by targeting the remaining 60 acres of the Project site, which consists of degraded sandy-bottom habitat with low biological diversity. Placement of the quarry rock on sand may result of suspended sediments and turbidity; however, these impacts would likely be minor and localized. Sediment grain sizes in the Project vicinity are generally too large to remain suspended in the water column for very long. As result, the levels of suspended sediments and turbidity resulting from the construction associated with this Project would likely remain well below levels that would substantially affect water turbidity.

Hard-bottom substrate in the Project area is potential habitat for the federally endangered white abalone (*Haliotis sorenseni*), as well as the pink abalone (*Haliotis corrugata*) and pinto abalone (*Haliotis kamtschatkana*), which are National Marine Fisheries Service (NMFS) species of concern. Although past surveys of the Project site did not detect these species, to ensure these species are not present at the time of construction, a pre-construction survey would occur within 30 days of the start of construction. If white abalone were discovered, NOAA would contact the University of California at Davis, which holds a permit for collection of white abalone to enhance captive broodstock. The survey would assure the white abalone meets the collection requirement that no other white abalone occurs within a 10-m radius, and then the white abalone would be collected and transferred to Davis. If pink or pinto abalone were discovered, or white abalone that do not meet the collection requirement, NOAA would consult with the California Department of Fish and Wildlife and, upon receiving authorization, relocate the animals to suitable habitat on the western side of Palos Verdes Peninsula, outside of the Project area.

To further protect hard-bottom habitat, an anchoring plan (see Appendix A) was developed to avoid anchoring in areas of hard substrate and minimize anchor drag, especially during inclement weather. The anchoring plan consists of the following components:

- Avoidance of areas of hard substrate greater than 30 percent (as identified in the side-scan sonar and diver ground-truthing surveys);

- Avoidance of areas of biological significance (as identified in the biological survey);
- Implementing measures to reduce drag on bottom habitat and postponing operations during inclement weather.

For these reasons, the Project is not considered to have a substantial adverse effect on less mobile or stationary species listed as candidate, sensitive, or special status species. Therefore, impacts to these species and habitats would be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No Impact. There is no riparian habitat present on the developed quarry sites or submerged Project site, and there are no identified sensitive natural communities that would be adversely affected by the Project. In fact, the Project would enhance the biological resources in the area, which has been degraded and has low biological diversity. For these reasons, there would be no adverse effect on riparian habitat or any sensitive natural community. Therefore, there would be no impact.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. There are no federally protected wetlands present either at the quarry sites or at the submerged Project site. Therefore, there would be no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact. The completed rocky reef would enhance the existing marine ecological conditions at and adjacent to the Project site. Project construction would be highly localized on a daily basis, with the pace of construction being 1 acre per day. Due to the small construction footprint, the anticipated response to construction activities by marine wildlife would be avoidance and the use of adjacent areas for predation, foraging, and migration. Additionally, there are no native wildlife nursery sites in the Project area. For these reasons, the Project would not substantially interfere with movement of migratory fish or wildlife species or impede the use of native wildlife nursery sites; therefore, the impact would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The Project would occur in an area where biological resources have been diminished overtime as a result of the effects of past region-wide waste water disposal. About 60 acres of the 69-acre Project site consist of degraded sandy-bottom habitat with low biological diversity. The remaining 9 acres are comprised of hard-bottom habitat, which is also degraded and low in biological diversity. The completed rocky reef would enhance existing ecological conditions at and adjacent to the Project site. As discussed in *a)* through *d)* above, the Project could temporarily displace biological resources from the Project area over the 60-day construction period, and has the potential to affect bottom habitat and biological resources as a result of derrick barge anchoring and quarry rock placement. However, due to the small Project footprint and temporary nature of Project construction, as well as an anchoring plan and avoidance of hard-bottom habitat, the Project would not conflict with existing plans and ordinances that protect or preserve biological resources. Therefore, there would be no impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

No Impact. As discussed in *e)* above, the Project would restore kelp and other marine biological resources in an area where such resources have been diminished over time by the effects of past region-wide wastewater disposal. The constructed rocky-reef habitat would not change the current use of the site, but would enhance its biological productivity. The restoration and enhancement of coastal marine biological resources is consistent with the California Coastal Act, the California Fish and Game Code, the California Resources Management Act, the California Ocean Plan, and the City of Rancho Palos Verdes Coastal Specific Plan. For these reasons, the Project would not conflict with any existing habitat conservation plans. Therefore, there would be no impact.

4.4 Mitigation Summary

The Project would not result in significant impacts to biological resources; therefore, no mitigation is required.

1 5.0 CULTURAL AND PALEONTOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 5.1 Environmental Setting

3 5.1.1 Archaeological Resources

4 Archaeological resources refer to any material remains of past human life or activities which are
5 of archaeological interest (for information regarding tribal cultural resources, see Section 17.0
6 Tribal Cultural Resources). These include items such as pottery, basketry, bottles, weapons,
7 weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock
8 carvings, intaglios, graves, and human skeletal materials that are more than 100 years old.

9 During the Pleistocene epoch, which occurred from about 70,000 to 10,000 years ago, there were
10 multiple sea level regressions and transgressions in which a symmetric rise and fall of sea level
11 both inundated and exposed the continental shelf to aerial and marine erosive processes. This
12 caused significant alterations in sea level, and by the end of the Pleistocene (about 10,000 years
13 ago), the current continental shelf and shoreline extended almost 500 feet (125 m) offshore from
14 where it is today (Masters and Flemming 1983). What are now inundated portions of the
15 continental shelf were likely occupied during the late Pleistocene and early Holocene epochs;
16 therefore, archaeological records are incomplete. There are two types of prehistoric remains that
17 may occur within water depths associated with the Project site:

- 18 • In situ prehistoric remains that pre-date the Holocene marine transgression and are situated
19 on relict, submerged landforms, either mantled with unconsolidated sediments or exposed
20 on bedrock outcrops.
- 21 • Remains deposited following the Holocene marine transgression that are situated on the
22 seafloor either on top of or within recent unconsolidated Holocene sediments. These
23 remains consist of isolated prehistoric or historic artifacts.

24 Evidence of the first human occupation of southern California was seen between 15,000 and
25 10,000 years ago, in the Pleistocene epoch (Moratto 1984, cited in Port of Los Angeles 2008). A
26 number of submerged archaeological sites have been located off the coast of southern California.
27 Many of these sites contain a variety of prehistoric artifacts, including manos, mutates, choppers

1 and pestles (Weinman and Stickel 1978; Bickel 1978; URS Corporation 1986). Most of these
2 known submerged archaeological sites and associated artifacts are located in relatively shallow
3 water. Many of the shallow water sites may be a result of cliff erosion and are most likely
4 associated with archaeological sites located on the cliffs above. Other submerged artifacts are the
5 consequence of random loss and some may have been purposefully discarded in association with
6 ceremonial rituals or other events.

7 A literature search of the known archeological sites in the Project area and within a 0.5-mile radius
8 of the Project site was conducted through the South Central Coast Information Center (2015). The
9 search included a review of all recorded archaeological and built-environment resources and
10 cultural resource reports on file. In addition, the California Points of Historical Interest, California
11 Historical Landmarks, California Register of Historical Resources, National Register of Historic
12 Places, and California State Historic Properties Directory listings were researched. These studies
13 determined that no archaeological resources exist at the Project site; however, there are several
14 recorded sites onshore. As a result of erosion and landslides in the area, these resources have the
15 potential to have been transported to the Project site.

16 5.1.2 Submerged Historic Resources

17 Submerged historic resources include sunken ships, boats, and other vessels such as: barges; cargo
18 or fittings such as anchors lost from vessels; sunken navigational equipment such as buoys; sunken
19 aircraft; and various sorts of industrial equipment related to activities such as offshore oil
20 development (CSLC 2015).

21 Results from a side-scan sonar survey conducted at the Project site in January 2014 (EcoSystems
22 Management Associates 2014) did not reveal any anthropogenic structures on the seafloor.
23 Subsequent surveys—a diver-based ground-truthing survey performed in April 2014 and an
24 additional biological survey in March 2015—did not reveal any historical resources that may have
25 been missed during the side-scan sonar survey.

26 Historic shipwrecks and other submerged historic resources within the vicinity of the Project area
27 are listed in the Shipwreck Database maintained by the CSLC (2015). While there are no
28 shipwrecks at the Project site, there are some within the vicinity of the Project area, the closest of
29 which is the ferry Melrose approximately 1.41 nm from the Project site.

30 5.1.3 Paleontological Resources

31 Paleontology is a form of geology that deals with the life of past geologic periods, as recorded in
32 fossil remains. Marine fossils in the Los Angeles area are found in the Los Angeles Basin. This
33 basin is one of more than 20 basins in California that were formed during the Tertiary Period,
34 which extended from about 2 to 65 million years ago. The Los Angeles Basin extends from the
35 Santa Monica mountains to the north, the foothills of the Santa Ana Mountains and the San Joaquin

Hills to the east, on the south by the ocean and the Palos Verdes Hills (or San Pedro Hills); and on the west by the ocean (Woodring 1938).

The two major classes of marine fossils that occur on the Palos Verdes Peninsula are Foraminifera and Mollusks. The fossils that occur on the Palos Verdes Peninsula and along the Los Angeles Basin are part of the Repetto formation, which was created in the Pliocene Epoch and occurred 5.33 to 2.58 million years before present. During the Pliocene Epoch, the sea extended beyond the present physiographic basin, extending across the Santa Monica Mountains, Palos Verdes Hills, and the San Joaquin Hills and covering part of the Santa Ana Mountains (Hargreaves 2013). Fossils in the Repetto formation are found in the major oil deposits in most of the major oil fields in the Los Angeles Basin. These fossils are assigned to three depth-range groups: (1) fossils of shallow water facies; (2) fossils of intermediate-depth facies, which range from shallow water into deep water; and (3) fossils of deep-water facies (Woodring 1938). Because the degree of research done in this area and their wide distribution through the Palos Verdes Peninsula, paleontological resources are not thought to be endangered (City of Rancho Palos Verdes 1975).

5.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to cultural and paleontological resources and the Project are identified in Attachment 1. At the local level, the City of Rancho Palos Verdes General Plan–Socio/Cultural Element (1975), includes a goal to preserve and protect its cultural resources, including all significant archaeological, paleontological and historical resources, and to promote programs to meet the social needs of its citizens. Policy 2 of this element, “Encourage the identification of archaeologically sensitive areas and sites,” is also relevant.

5.3 Impact Analysis

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

a) and b) No Impact. No known historical or archaeological resources are within the Project area based on a records search and field surveys on the Project site and up to 0.5 mile from the Project boundary, in addition to subsequent field surveys, including side-scan sonar surveys and visual inspection by divers. Further, no human-made materials were detected during these field surveys. The 69-acre site is located in water depths where sediment movement is dynamic and the sediment cover is discontinuous and thin; as a result, this is not an environment in which historical materials are expected to remain in place or be buried. Therefore, there would be no substantial adverse change in the significance of historical resources. Therefore, there would be no impact.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. The Project would involve placing non-fossiliferous granite quarry rock on the seafloor in a location underlain by middle-to-late Miocene-age shale and mudstone known as the Altamira Shale. The Altamira Shale is fossiliferous, including numerous fish species associated with a Miocene-age subtropical shallow sea. However, the Altamira Shale is common in the Palos Verdes Peninsula and readily accessible to geologists and paleontologists in the hills to the northeast of the Project site. Additionally, no excavation would take place on the Project site; the quarry rock would be placed on top of the Altamira Shale. For these reasons, no paleontological resources would be directly or indirectly destroyed by the Project. Furthermore, there are no unique geological features associated with the Project site. The seafloor in this location is a rocky, low-relief area that is geologically similar to many other areas in the vicinity of the Palos Verdes Peninsula and elsewhere along the southern California coastline. Therefore, the Project would not destroy a unique paleontological resource or site or unique geologic feature. Therefore, there would be no impact.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No Impact. The Project would be located in a submerged location 0.3 mile from the shoreline in a dynamic environment of strong ocean currents and thin layers of shifting sand. The location and nature of the environment is such that interred human remains do not occur. Furthermore, there would be no excavation on the Project site; the quarry rock would be placed on top of the sediment. As a result, no interred human remains would be disturbed by the Project. Therefore, there would be no impact.

5.4 Mitigation Summary

The Project would have no impacts to cultural and paleontological resources; therefore, no mitigation is required.

1 6.0 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 6.1 Environmental Setting

3 6.1.1 Geologic Setting

4 The Project site is located offshore of the Palos Verdes Peninsula on the San Pedro Shelf. The San
5 Pedro Shelf is broad and shallow, generally extending seaward 4.8 to 19 km; however, offshore of
6 the Project site the shelf is relatively narrow (about 2 km wide; Nardin and Henyey 1978). Seaward
7 of the shelf break, the continental slope is narrow and steep, and terminates at the nearly flat 800
8 m deep floor of the San Pedro Basin (Lee et al. 2002).

9 The Palos Verdes Peninsula is primarily composed of seaward-dipping siliceous shales and
10 volcanic rocks of the Altamira member of the Miocene Monterey Formation (Lee et al. 2002).
11 The Palos Verdes Peninsula is underlain by the Catalina Schist which is exposed in the middle of
12 the anticlinal structure (Fisher et al. 2003). There is a large unconformity between the Cretaceous
13 Catalina Schist (95 to 115 million years ago) and the overlying middle to late Miocene age (6 to
14 15 million years ago) deep-marine Monterey Formation (Woodring et al. 1946; Conrad and Ehlig
15 1987). The Monterey formation has been broken down into three main lithologic units: Altamira

Shale; Valmonte Diatomite; and Malaga Mudstone (Woodring et al. 1946). Of these three lithologic units, the Miocene Altamira Shale covers a majority of exposed bedrock over the Palos Verdes Peninsula (Conrad and Ehlig 1987). Within the Altamira Shale unit is a tuffaceous unit formed during volcanic eruptions that occurred 9 to 15 million years ago during a period of extension (Conrad and Ehlig 1987). The ash from these volcanoes combined with fine ocean sediments to form a bentonite clay layer which is the slide layer upon which most Palos Verdes landslides occur. It is this bentonite clay that acts as the “slip plane” for almost every major landslide that occurs on the Peninsula (Haneberg 1995).

Diver surveys conducted at the Project site in April 2014 showed that approximately 71 percent of the Project area contained less than 30 percent hard substrate coverage, 35 percent of the area contained coarse-grained sandy bottom, and 47 percent of the area had sediment depths (above bedrock) less than 0.5 m.

6.1.2 Seismic Hazards

The Project area straddles the tectonically active boundary between the onshore Los Angeles Basin and the offshore California Continental Borderland (Fisher et al. 2003). The Palos Verdes Fault Zone forms the western boundary of the Los Angeles Basin. The Palos Verdes Peninsula is a tectonic fault block, a compressional feature bounded between regional northwest trending, southwest dipping faults (Woodring et al. 1946; Yerkes et al. 1965). These compressional forces are causing the Palos Verdes Peninsula to be uplifted and squeezed into an anticlinal form, causing the once horizontally deposited sediments to be deformed into an arch, which has led to destructive landslides over at least the last 250,000 years.

The Project area lies at the intersection of the North American and Pacific Plates. The interaction between these two tectonic plates has produced numerous active faults in the region. Faults present on or near the Palos Verdes Peninsula include the Cabrillo fault, Palos Verdes fault, Thums-Huntington fault, and Newport-Inglewood fault. The Palos Verdes and Newport-Inglewood, and Whittier faults are the most significant nearby faults in terms of potential seismic hazards, capable of producing earthquakes of at least magnitude 7.0 on the Richter scale. The California Geological Survey establishes criteria for determining faults as active, potentially active, or inactive. Active faults are those that show evidence of surface displacement within the last 11,000 years. Potentially active faults are those that demonstrate displacement within the past 1.6 million years. Faults showing no evidence of displacement in the last 1.6 million years are considered inactive.

6.1.3 Landslides

Landslides have occurred throughout the Palos Verdes Peninsula, but none are more prominent than those of the Portuguese Bend Ancient Landslide Complex and surrounding areas. As mentioned above, the bentonite clay layer within the Altamira Shale serves as the slide plane for almost all of the landslides (LGC Valley, Inc. 2011). For those landslides that reach the coast, wave removal of the toe of the landslide further contributes to the occurrence of landslides by

1 providing space for more landslide material to move downhill and through undercutting of the sea
2 cliffs. Positive feedback occurs within these landslide complexes due to decreased support on up-
3 slope material, as well as increased water infiltration due to fractured landslide material that creates
4 buoyancy forces and decreases the strength of underlying clays.

5 More than 180 landslides have occurred on the Palos Verdes Peninsula (Haydon 2007), with more
6 than 130 homes being destroyed in the last 60 years. Historical landslides associated with the
7 Portuguese Bend Landslide (PBL; 1956 to 1999³) and Abalone Cove Landslide (1974 to 1985³)
8 indicate that mass movements have been occurring regularly throughout the Portuguese Bend
9 Ancient Landslide Complex. Starting in the 1980s, land management practices and engineering
10 solutions (e.g., dewatering efforts, installation of new septic systems, better landscaping practices,
11 regrading, installation of surface drains, and shoreline protective measures) were implemented to
12 slow the PBL. These efforts have substantially decreased the rate of landslide movement to about
13 10 percent of former rates (Kayen et al. 2002; Lee et al. 2002; EPA 2009; Calabro et al. 2010), and
14 data in 2000 suggested that the landslide had decreased substantially from its 1998 movement
15 (Kayen et al. 2002). Movement rates based on 1995 to 2000 data indicate an average rate of 1
16 m/year, compared to an average rate of 3.3 to 3.8 m/year from 1956 to 2002 (Calabro et al. 2010).
17 Landslide erosion at the toe of the PBL is mainly initiated by storm events and is not always related
18 to the rate of landslide movement (Kayen et al. 2002). Sediment from the toe of the landslide was
19 redistributed by several large storms that occurred in 1982, 1983, and 1988 (Santschi et al. 2001).

20 Even with the structural improvements mentioned above, a large earthquake on any of the greater
21 Los Angeles region faults would likely produce multiple landslides on the Palos Verdes Peninsula,
22 and depending on the size of the earthquake, millions of cubic yards of sediment could be deposited
23 in the nearshore zone south of the Palos Verdes Peninsula. In addition to earthquakes, large rain
24 years, especially El Niño Southern Oscillation years, could trigger landslides. Once the soil has
25 become fully saturated and heavy, and the land management practices/solutions have been stressed
26 or overwhelmed, landslides are likely to occur. Predicting the size and location of these landslides
27 is not currently possible.

28 6.1.4 Currents and Sediment Movement

29 The California Current System, the dominant system affecting the SCB, is composed of a complex
30 array of north- and south-flowing currents and undercurrents. The California Current System
31 branches shoreward within the SCB, and forms the Southern California Countercurrent. Similar to
32 the California Undercurrent, the Southern California Countercurrent system runs in a northerly
33 direction. While the California undercurrent in the inner SCB is perennially pole-ward, the surface
34 current is highly variable. At times, especially the summer to early fall, an eddy-like circulation
35 pattern, called the Southern California Eddy, forms around the offshore islands coinciding with

³ The great majority of the movement of this landslide occurred in the years mentioned, but the slide has continued into the present.

the offshore equator-ward flowing California Current and the inshore pole-ward flowing counter current (Hickey 1992; Browne 1994).

The Palos Verdes Shelf sediments are derived from multiple sources, including: (1) landslides; (2) effluent from the White Point Outfall; (3) riverine discharge; and, to a smaller extent, (4) primary production. However, the two largest sediment sources near the Project area are landslides and effluent from the outfall (Santschi et al. 2001; Kayen et al. 2002; EPA 2009). Input from other sources, such as rivers, is restricted due to shelf circulation patterns, the Redondo Submarine Canyon to the northwest, and the exposed bedrock ridge that traces the submarine extension of the Cabrillo fault system, acting as an impediment to sediment bypass (Lee et al. 2002; EPA 2009). The base level of sedimentation, at around the 60-m isobath, is estimated to be 1.3 cm/year (Santschi et al. 2001). Sediments derived from the nearby Portuguese Bend Landslide move in an east to southeasterly direction between the 5 to 15 m isobaths (Kayen et al. 2002; Dong et al. 2009).

6.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to geology and soils and the Project are identified in Attachment 1. No local laws relevant to this issue area are applicable to the Project.

6.3 Impact Analysis

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The Project area does not fall within the Alquist-Priolo Special Study fault zone, an ordinance passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The Project involves the placement of quarry rock on the seafloor 0.3 mile offshore and does not include the construction of any buildings or structures that would potentially be damaged or cause injury or death. Therefore, there would be no impact.

ii) Strong seismic ground shaking?

No Impact. The placement of quarry rock on the seafloor would not cause strong seismic shaking, nor would a seismic event cause substantial adverse effect including the risk of loss, injury, or death due to quarry rock placement; therefore, there would be no impact.

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

1 **iii) and iv) No Impact.** The Project would occur in 15 to 21 m of water 0.3 mile offshore Rancho
2 Palos Verdes. The continental shelf in this region has an average slope of less than 1°. For this
3 reason, there is no risk of seismic related ground failure and landslides. Although there is the
4 potential for liquefaction of the sediments underlying the reef that could lead to settling and
5 subsidence of the reef, there are no potential substantial adverse effects, including the risk of loss,
6 injury, or death due to the offshore location of the reef. Therefore, there would be no impact.

7 ***b) Result in substantial soil erosion or the loss of topsoil?***

8 **No Impact.** The Project would use rock from existing developed quarries and would place the
9 rock on the seafloor where topsoil does not exist. Soil, including topsoil, is the result of subaerial
10 weathering processes and therefore does not form in submerged marine locations. Therefore, there
11 would be no impact.

12 ***c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a***
13 ***result of the Project, and potentially result in on- or off-site landslide, lateral spreading,***
14 ***subsidence, liquefaction or collapse?***

15 **No Impact.** The Project site is located 0.3 mile offshore on a gently sloping seafloor where hard,
16 stable Altamira Shale bedrock is only thinly covered by sand. Because the Project site is gently
17 sloping and closely underlain by hard bedrock, there is no potential for landslide, lateral
18 spreading, subsidence, liquefaction, or collapse. Therefore, there would be no impact.

19 ***d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code***
20 ***(1994), creating substantial risks to life or property?***

21 **No Impact.** Project construction would not involve the construction of foundations, require
22 grading, excavation, drainage, or erosion control, and therefore is not impacted by the Uniform
23 Building Code. Therefore, there would be no impact.

24 ***e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste***
25 ***water disposal systems where sewers are not available for the disposal of waste water?***

26 **No Impact.** Project construction would not involve the use of septic tanks or alternative
27 wastewater disposal systems. As a result, the Project would have no impact on soils capable of
28 supporting the use of septic tanks or alternative waste water disposal systems. Therefore, there
29 would be no impact.

30 **6.4 Mitigation Summary**

31 The Project would not result in significant impacts to geology and soils; therefore, no mitigation
32 is required.

7.0 GREENHOUSE GAS EMISSIONS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7.1 Environmental Setting

Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). GHGs are emitted by natural processes as well as by human activities. Examples of GHGs that are produced by both natural processes and human activities include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Examples of GHGs that are created and emitted primarily as the result of human activity include fluorinated gases (hydrofluorocarbons [HFCs] and perfluorocarbons [PFCs]) and sulfur hexafluoride (SF₆).

Each GHG has a varying global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. By convention, CO₂ is assigned a GWP of 1. By comparison, CH₄ has a GWP of 21, which means that it has a global warming effect 21 times greater than CO₂ on an equal-mass basis. N₂O has a GWP of 310, which means that it has a global warming effect 310 times greater than CO₂ on an equal-mass basis. To account for their GWPs, GHG emissions are often reported as a CO₂ equivalent (CO₂e). The CO₂e is calculated by multiplying the emission of each GHG by its GWP, and adding the results together to produce a single, combined emission rate representing all GHGs (Port of Los Angeles 2008).

The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without natural GHGs, the earth's surface would be approximately 34° Centigrade (C) cooler (Hendrix et al. 2007). GHGs differ from criteria pollutants in that GHG emissions do not cause direct, adverse human health effects. Rather, the direct environmental effect of GHG emissions is an increase in global temperatures, which in turn has numerous indirect effects on the environment and humans (Port of Los Angeles 2008).

7.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to GHG emissions and the Project are identified in Attachment 1. At the local level, the SCAQMD has regulatory jurisdiction over stationary sources of air emissions within the SCAB. Mobile sources, such as transportation vehicles and mobile construction equipment are not regulated by the air districts, except where these are operated as stationary sources. Stationary sources of air emissions for the Project include idling tugboats and the equipment used during the loading and offloading of the barges. Mobile

sources of air emissions for the Project, which are not regulated by the SCAQMD, include the trucks used to haul the quarry rock and the tugboats underway to and from the Project site. The SCAQMD posts a significance threshold of 10,000 metric tons (MT)/year of CO₂e emissions for industrial projects, 3,000 MT/year for commercial projects, and 1,100 MT/year for mixed projects where the SCAQMD is the lead agency (SCAQMD 2008).

7.3 Impact Analysis

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. While GHG emissions would be produced during construction of the reef, upon completion, no Project GHG emissions would occur. Table 6-2 of the DEA provides cumulative GHG (CO₂ and CH₄) emissions and computed CO₂e values associated with the Project. Total CH₄ and CO₂ emissions are 0.047 MT (103.3 pounds) and 347.8 MT (766,843.8 pounds), respectively. Thus, Project construction would not exceed the SCAQMD threshold of 10,000 MT/year for industrial projects, 3,000 MT/year for commercial projects or 1,100 MT/year for mixed projects, and GHG emissions would be considered less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. As described in *a)* above, Project construction emissions would not exceed SCAQMD thresholds of significance and would not have a significant impact on the environment or substantially contribute to global GHG emissions. As a result, the Project would not conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions. Therefore, there would be no impact.

7.4 Mitigation Summary

The Project would not result in significant impacts to GHG emissions; therefore, no mitigation is required.

1 8.0 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 8.1 Environmental Setting

3 Hazardous materials are generally referred to as substances with chemical compositions or other
4 properties that make them capable of causing illness, death, or some other kind of harm to humans
5 and/or other life forms when mismanaged or released into the environment (California Department
6 of Toxic Substances Control 2016). For this Project, concerns about hazardous materials are
7 related to the transport and disposal of potentially hazardous materials, which may include the
8 following: (1) quarry rock used for reef construction and (2) oil and gas aboard marine vessels.

8.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to hazards and hazardous materials and the Project are identified in Attachment 1. At the local level, the following plans are applicable to the Project.

- Los Angeles County has a Local Government Marine Oil Spill Contingency Plan designed to document the procedures necessary to deal with an oil spill in marine waters and on the shores of Los Angeles County. This plan informs community responders, planners, and residents about the potential hazardous ramifications of marine oil spills, and directs coastal communities and special districts at risk for an oil spill to create emergency response plans compatible with the Los Angeles County Operational Area Emergency Response Plan.
- The Los Angeles/Long Beach North Area Committee has developed a site-specific oil spill response plan called the Area Contingency Plan. This plan provides guidance on oil spill response, including the organization of incident command, planning and response roles and responsibilities, response strategies, and logistics. The Plan is updated annually.
- The City of Rancho Palos Verdes General Plan (1975) sets goals and standards to manage the City's marine safety. Through the General Plan, the City seeks to provide, maintain, and enhance safe, clean, healthy beaches and other marine resources for the public's enjoyment; to provide adequate emergency medical and marine safety services; to maintain the coastline in a manner that prevents the degradation of the community's visual and environmental resources; and to continue coordinating with the Rancho Palos Verdes Fire Department and other appropriate public agencies to provide emergency responses to spills, illegal dumping, and other incidents involving hazardous materials or waste.

8.3 Impact Analysis

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

a) and b) Less Than Significant Impact. The Project would place approximately 70,000 standard tons of quarry rock at the Project site. The rock, which would come from the Pebbly Beach and Empire Quarries on Santa Catalina Island, could potentially be considered a hazardous substance. However, this potential impact would be reduced to less than significant by implementing California Department of Fish and Wildlife Material Specification Guidelines (Wilson et al. 1990), which state that:

- The materials shall be clean and free of any contaminants, especially those that could dissolve in seawater (e.g., asphalt, paint, oil, or oil stains).

- All rocks used for the Project must be accepted by state and federal agencies in the following respects:
 - Purity: The materials shall be free of contamination and foreign materials.
 - Specific gravity: Shall be greater than 2.2.
 - Durability: Rocks used must remain unchanged after 30 years of submersion in seawater.

Reef construction would also use marine vessels and equipment powered by diesel fuel and lubricated by oil and other mechanical fluids, which are considered hazardous substances. Accidental releases of hazardous substances from Project vessels, vehicles, or equipment would have potential adverse environmental impacts. All ocean-going vessels used for the Project would not transport such substances in quantities in excess of their operating requirements. Additionally, vessels would maintain emergency response and oil spill prevention plans in accordance with applicable regulations (see Appendix B). Equipment and supplies to respond to a spill would also be onboard. Further, construction crews would be licensed, trained in oil spill response, and have a regular maintenance program to prevent a spill from an equipment malfunction. With the implementation of the above measures, the potential for diesel fuel, oil, mechanical fluids and other hazardous materials to create a significant hazard to the public or environment through routine transport, use, or disposal is less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact. The Project site is located 0.3 mile offshore, and is not within 0.25 mile of an existing or proposed school. The nearest school, Mira Catalina Elementary School, is 1.37 miles from the Project site. Therefore, there would be no impact.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code section 65962.5 requires the California Environmental Protection Agency to develop an updated Cortese List at least annually. The Project site is not included on the list of over 500 California hazardous material sites compiled pursuant to Government Code section 65962.5; however, the Project site is not far from the Palos Verdes Shelf-White Point Outfall which is on the list and was an area adversely affected by wastewater discharge from White Point Outfall. Because the purpose of the Project is to restore biological resources adversely affected by this wastewater discharge, the proximity of the Project site to the impacted area was one of the site criteria for selecting the site. Therefore, given the information above, the Project would not create a significant hazard to the public or environment. Therefore, there would be no impact.

1 *e) For a project located within an airport land use plan or, where such a plan has not been*
2 *adopted, within 2 miles of a public airport or public use airport, would the Project result in*
3 *a safety hazard for people residing or working in the Project area?*

4 *f) For a project within the vicinity of a private airstrip, result in a safety hazard for people*
5 *residing or working in the Project area?*

6 **e) and f) No Impact.** No public or public-use airports or private airstrips are within 2 miles of the
7 Project site. The nearest airport, Torrance Zamperini Field Airport, is approximately 5.2 miles
8 from the Project site. Additionally, the construction of a fully submerged rocky reef would not
9 include any equipment that would present a risk to air traffic. Therefore, there would be no impact.

10 *g) Impair implementation of or physically interfere with an adopted emergency response plan*
11 *or emergency evacuation plan?*

12 **No Impact.** The Project would not interfere with the implementation of emergency response or
13 evacuation plans in the area due to the Project's location (0.3 mile offshore), limited duration (60
14 days), and limited number of vessels operating on site. Therefore, there would be no impact.

15 *h) Expose people or structures to a significant risk of loss, injury or death involving wildland*
16 *fires, including where wildlands are adjacent to urbanized areas or where residences are*
17 *intermixed with wildlands?*

18 **No Impact.** The location and nature of the Project 0.3 mile offshore are such that there is no
19 potential for wildfires to occur. Therefore, there would be no impact.

20 **8.4 Mitigation Summary**

21 The Project would not result in significant impacts to hazards and hazardous materials; therefore,
22 no mitigation is required.

1 9.0 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 9.1 Environmental Setting

3 The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos
4 Verdes Peninsula, Los Angeles County. Nearshore marine water quality is influenced by many
5 factors, including local currents and freshwater inflow, natural hydrocarbon seeps, vessel traffic,
6 port infrastructure and petroleum development activities, municipal and stormwater discharges
7 through ocean outfalls, and other point and nonpoint sources. Many of these sources contribute to
8 increased levels of nutrients, trace metals, and synthetic organic contaminants in offshore waters.

Approximately 2 km from the Project site is White Point Outfall. Since 1937, the Joint Water Pollution Control Plant, located in Carson, has sent treated wastewater to ocean outfalls at White Point. From approximately 1950 through 1971, dichlorodiphenyltrichloroethane (DDT) was discharged from this outfall. Polychlorinated biphenyls (PCBs) were also discharged from this outfall until 1976. In 1971, emissions of DDT and PCBs effluent were 21.1 MT and 5.2 MT, respectively (EPA 2013). The highest concentrations of DDT and PCBs in the sediments are located at the 60-m isobath, near the White Point Outfall (Lee et al. 2002). Contaminants are not found farther inshore than the 30-m isobath due to high wave energy and a larger grain size that is unable to retain the contamination (Lee et al. 2002; EPA 2003). An EPA (2013) study of surface sediments surrounding the White Point Outfall found an observed decrease in DDT concentrations, from 110 MT to 20 MT, over a 6-year period from 2003 to 2009, and a decline in PCB concentrations from 10 MT to 0.1 MT. These decreases are believed to have been caused by: (1) dechlorination, (2) sediment deposition and burial from terrestrial sources; and (3) sediment resuspension, coupled with desorption of chemicals of concern from sediment into seawater (Santschi et al. 2001; EPA 2013). These current DDT and PCB concentrations are below requirements for cleanup efforts or capping (EPA 2013).

9.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to hydrology and water quality and the Project are identified in Attachment 1. At the local level, the City of Rancho Palos Verdes Coastal Specific Plan (1978) includes the following policy that may be related to the Project:

- Policy 13: Encourage and support programs, policies and actions of other agencies designed to maintain, manage, and restore the ocean water quality.

9.3 Impact Analysis

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. During construction, placement of quarry rock at the Project site would temporarily resuspend fine sands and silts on the seafloor causing a temporary local increase in turbidity. Some sediment may also be introduced to the water from material on the quarry rock. As a result, the placement of quarry rock at the Project site has the potential to impact the local water quality through the introduction of contaminants and through the resuspension of sediments.

Permits for the discharge of fill material would be obtained from the U.S. Army Corps of Engineers and the Los Angeles Regional Water Quality Control Board, pursuant to Clean Water Act Section 401. Such permits typically include the following criteria to reduce impacts to water quality:

- Education of Project personnel on pollution prevention measures, spill response procedures, and implementation and maintenance of best management practices (BMPs)

- Compliance with the Water Quality Orders and Statewide General Waste Discharge Requirements for the discharges of dredged or fill material
- Washing of reef material that contains mud, silt, or other pollutants from equipment prior to placement
- Prevention of hazardous substances entering waters through the proper implementation of BMPs
- Visual monitoring of turbidity plumes by a qualified observer during each day of construction. If visual monitoring indicates turbidity greater than ambient 0.5 mile from the discharge site at any time for two consecutive days then the Regional Board must be notified, mitigation measures must be enacted to reduce turbidity, and if turbidity persists, daily water clarity testing and reporting may be required.

Artificial reef construction must also conform to California Department of Fish and Wildlife Material Specification Guidelines and Notification Procedure for Augmentation of Artificial Reefs with Surplus Materials. These guidelines specify the following:

- The materials shall be clean and free of any contaminants, especially those that could dissolve in seawater (e.g., asphalt, paint, oil, or oil stains).
- All rocks used for the Project must be accepted by state and federal agencies in the following respects:
 - Purity: The materials shall be free of contamination and foreign materials.
 - Specific gravity: Shall be greater than 2.2.
 - Durability: Rocks used must remain unchanged after 30 years of submersion in seawater.

Given the above BMPs to reduce impacts to water quality, the Project would have a less than significant impact on water quality standards or waste discharge requirements.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. The Project, which would be located 0.3 mile offshore, does not involve groundwater extraction, and no groundwater recharge facilities are in the vicinity of the Project site; therefore, there would be no impact.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

c) through e) No Impact. The Project, which would be located 0.3 mile offshore, would not alter the existing drainage pattern of the site or area or create or contribute runoff that would exceed the capacity of stormwater drainage systems; therefore, there would be no impact.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. See answer to *a)* above.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

g) through i) No Impact. The Project, which would be located 0.3 mile offshore, does not involve housing, would not impede or redirect flood flows in a 100-year flood-hazard area, and would not be located in a submerged offshore location where flooding does not occur and where levees and dams do not exist; therefore, there would be no impact.

j) Expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. The Project involves placing quarry rock on the seafloor 0.3 mile offshore to enhance marine ecological resources, and does not include the construction of housing and/or other kinds of structures that can be inhabited or used by people. The Project is located offshore, which could expose workers to a seiche or tsunami if one were to occur; however, due to the short Project construction duration, impacts of a seiche or tsunami are considered low. Additionally, there is no potential to expose people, including workers, or structures to mudflows since these terrestrial phenomena do not occur in a marine environment. Therefore, this impact would be less than significant.

9.4 Mitigation Summary

The Project would not result in significant impacts to hydrology and water quality; therefore, no mitigation is required.

1 **10.0 LAND USE AND PLANNING**

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **10.1 Environmental Setting**

3 The Project would be located between Bunker Point and White Point on the Palos Verdes
4 Peninsula, approximately 0.3 mile offshore, past the existing kelp beds and in water depths
5 between 15 to 23 m. The land area directly inshore of the Project site is under the jurisdiction of
6 the City of Rancho Palos Verdes. One-third of the total land is vacant, with more than three-fourths
7 of the immediate coastline land vacant (City of Rancho Palos Verdes 2013b). Land use near the
8 Project site is predominately single-use residential and open space. Directly inshore of the Project
9 site is the Ocean Trails Reserve and a golf club. To the northwest of the Project site is a large open
10 space, occupied by the Abalone Cove Preserve and the City of Rancho Palos Verdes' Abalone
11 Cove Shoreline Park. The land to the southeast of the Project site is under the jurisdiction of the
12 City of San Pedro. This area is predominantly residential and open space. Open space areas include
13 the White Point Nature Preserve and the Point Fermin Park.

14 **10.2 Regulatory Setting**

15 Federal and state laws and regulations pertaining to and relevant to land use and planning and the
16 Project are identified in Attachment 1. Various entities address this issue area at the local level, as
17 discussed below.

18 The City of Rancho Palos Verdes General Plan (1975) focuses on land use and planning within
19 City boundaries, not offshore at the Project site, but establishes standards for noise that might
20 affect coastal residences and commercial structures during the Project's construction phase. The
21 City's Visual Resources Element (2013a) generally encourages the maintenance of scenic vistas,
22 but does not establish specific visual standards applicable to the proposed construction activities.
23 The City's Coastal Specific Plan (1978) encourages the restoration of marine biological resources
24 restoration in adjacent waters. These three components of the City of Rancho Palos Verdes General
25 Plan are considered in the noise, visual, and biological components of this Initial Study.

The County of Los Angeles General Plan (1980) focuses on land use and planning in the County's unincorporated areas, including land along the coast and on offshore islands. It does not include ocean waters or incorporated parts of the County. The Project site is adjacent to the incorporated City of Rancho Palos Verdes, and therefore is not adjacent to a County Planning Area. The quarry site on Catalina Island lies in the County's Coastal Island Planning Area.

10.3 Impact Analysis

a) Physically divide an established community?

No Impact. The Project would involve short-term construction of a submerged rocky reef 0.3 mile offshore, and does not include any above-ground structures which would physically divide an established community; therefore, there would be no impact.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

b) and c) No Impact. The Project would restore kelp and other marine biological resources in an area where such resources have been diminished over time by a number of effects, including region-wide wastewater disposal. The rocky-reef habitat that would be created by the placement of quarry rock at the Project site would not change the current use of the site, but would enhance its biological productivity.

The submerged reef location would not be affected by sea-level rise and, as discussed in Section 15.0, Recreation, based on research performed by Elwany et al. (1998), the rocky-reef habitat and associated kelp forest should not influence the size, shape, and direction of waves near the Project site; therefore, sea-level rise analysis pursuant to state and local agency plans and practices is not applicable.

Abalone Cove State Marine Conservation Area (SMCA) and Point Vicente State Marine Reserve (SMR) are two adjoining marine protected areas (MPAs) located in the general vicinity of the Project site. Abalone Cove SMCA lies about 1.5 miles to the west-northwest, while Point Vicente SMR is located about 2.7 miles west-northwest of the Project site. These two MPAs cover a total of 19.87 square miles, and protect natural habitats and marine life by protecting or limiting removal of wildlife from within their boundaries. For example, Point Vicente SMR prohibits all take of living marine resources, and Abalone Cove SMCA prohibits take of all living marine resources except recreational and commercial take of specific species. The Project would not impact these MPAs, and no take is expected in connection with the Project.

1 The restoration and enhancement of coastal marine biological resources is consistent with the
2 California Coastal Act, California Fish and Game Code, California Ocean Resources Management
3 Act, Coastal Zone Management Act, California Ocean Plan, and City of Rancho Palos Verdes
4 Coastal Specific Plan. There are no conflicts with the Marine Life Protection Act or general or
5 specific plans or policies adopted by the City of Rancho Palos Verdes or the County of Los
6 Angeles. For these reasons, the Project would not conflict with any applicable land use plan,
7 policy, or regulation. Therefore, there would be no impact.

8 **10.4 Mitigation Summary**

9 The Project would have no impacts to land use and planning; therefore, no mitigation is required.

11.0 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

11.1 Environmental Setting

The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula in Los Angeles County. Potential mineral resources that could be found in the Project vicinity include sand and gravel resources, as well as oil and natural gas deposits. To construct the rocky reef, 7,000 tons of quarry rock would be extracted from the Pebbly Beach and Empire Quarries (State Mine ID Nos. 91-19-0010 and 91-19-0011, respectively) located on Santa Catalina Island, approximately 26 nm from the Project site. Both quarries, which are operated by Pacific-Connolly Company, are identified on the Department of California Office of Mine Reclamation's "AB 3098 List" as meeting Surface Mining and Reclamation Act provisions set forth under Public Resources Code section 2717, subsection (b). The type of quarry rock material that would be used is riprap, with each rock weighing between 0.25 and 1 ton.

11.1.1 Quarry Rock

Quarry rock is quarried from relatively consolidated formations comprised of either sedimentary or igneous rock and can be used in a variety of ways. In its largest form, it can be used to create riprap (e.g., for slope stabilization, marine breakwaters) or dimension stone (e.g., for building and construction, flagstone, curbing, and monumental stone). Crushed quarry rock material is referred to as aggregate, which includes sand, gravel, and crushed stone, which are often used in construction. These aggregate materials also provide the bulk and strength to Portland Cement Concrete (PCC), asphaltic concrete, plaster, and stucco.

Aggregate is an important commodity in California because of its use in the building and paving industries. These industries consume large quantities of aggregate, and future demand for this commodity is expected to increase throughout California. Because of its importance, the California Department of Conservation tracks the availability and consumption of aggregate in aggregate study areas. Aggregate study areas follow either a Production-Consumption (P-C) region boundary (one or more aggregate production districts and the market area those districts serve) or a county boundary. Approximately 4 billion tons of permitted aggregate reserves lie within the 31 aggregate study areas. In 2012, the total production of construction aggregate (sand-and-gravel and crushed stone) was 121.3 million tons (Clinkenbeard and Smith 2014).

The availability of, and demand for, PCC-grade aggregate in Los Angeles County was last reviewed in 1994 in a report titled Update of Mineral Land Classification of Portland Cement Concrete Aggregate in Ventura, Los Angeles, and Orange Counties, California (Miller 1994). In this report, Los Angeles County was divided into five P-C regions, and the Catalina Island area was not included. This report also estimated that Los Angeles County contains approximately 11,179 million tons of PCC-grade resources and 750 million tons of PCC-grade aggregate reserves; however, projection data indicate that existing reserves may be depleted by 2016.

In an updated report for the San Gabriel Valley P-C region (one of the five P-C regions in Los Angeles County), Clinkenbeard (2012) indicated that the region had between 11 and 20 years of permitted aggregate reserves remaining. In the San Gabriel Valley P-C region alone, 800 million tons of aggregate are expected to be needed by the end of 2060. According to the updated report, the highest areas of demand in California were the South San Francisco Bay area, the Temescal Valley-Orange County area, and the Western San Diego County area, which are expected to require more than 1 billion tons of aggregate by the end of 2060.

11.1.2 Sand and Gravel

Sand and gravel are resources used primarily in construction and beach nourishment projects. Most sand and gravel come from land-based deposits, although there is an interest in using offshore sources (Mokhtari-Saghafi and Osborne 1980; California Geological Survey 2005). However, because of the narrow continental shelf in southern California, together with the many technical, economic, and legal restrictions on dredging in the United States, very few areas along the coastal shelf of southern California are accessible for the potential extraction of sand. One of the few accessible areas is the Santa Monica Shelf. This area is located offshore of the Los Angeles Basin, extending from the City of Santa Monica south to the City of Redondo Beach. Areas suitable for sand extraction are located at the 40-m contour. Within the Santa Monica Shelf, two areas have been identified as potential offshore sand sources: Area I, B-IV, and Area I, B-V. These two sites, which are located north of the Project site, contain 325 million cubic yards and between 18 and 66 million cubic yards of sand, respectively. The Project site itself is not currently intended for offshore sand extraction, nor is it close to any areas that are in need of sand replenishment, which mainly exist to the north along the beaches of Santa Monica (California Geological Survey 2005).

11.1.3 Phosphorite

Phosphorite is a type of sedimentary rock that contains large quantities of phosphate-bearing minerals used in fertilizers and other products. Phosphate deposits come from three main sources: (1) marine sedimentary phosphorite, (2) apatite-rich igneous rock, and (3) ancient and modern guano accumulations (Glenn et al. 1994). Marine phosphorites mainly occur as crusts, plates, nodules, muds, and sands, and are found in shallow waters of fewer than 1,000 m (Rowland and Cruickshank 1983). Nodular phosphorite is the most abundant type of rock in non-depositional environments in southern California, with approximately one-third of all the rock recovered in this area being phosphorite (Dietz et al. 1942). A survey of phosphate deposits in Santa Monica Bay

estimated that 50 million tons of nodules and 12.5 million tons of phosphate sands were present (Inderbitzen et al. 1970). Historically in the United States, marine phosphorites occurred in large enough quantities to be economically viable off the coast of southern California (Rowland and Cruickshank 1983); however, the most recent Mineral Commodity Summary prepared by the U.S. Geological Survey (Jasinski 2014) indicates that most (greater than 85 percent) of the existing phosphate rock in the United States was mined from Florida and North Carolina, with the remainder from Idaho and Utah. In 1980, the United States accounted for 40 percent of the world's production (Rowland and Cruickshank 1983); however, currently it accounts for only approximately 14 percent of world production (Jasinski 2014). Anticipated depletion of onshore resources, coupled with increasing onshore land-use conflicts, have made questionable the value of further marine phosphorite mining (Rowland and Cruickshank 1983).

11.1.4 Oil and Gas Deposits

Oil resources have been identified at 23 major oil-drilling locations or state-designated oil fields in Los Angeles, which in whole or in part underlie the City (Port of Los Angeles 2008); however, none of these areas underlie the Project site and there are no active pending leases.

11.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to mineral resources and the Project are identified in Attachment 1. No local laws relevant to this issue area are applicable to the Project.

11.3 Impact Analysis

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

Less Than Significant Impact. The Project would involve placing quarry rock on 40 acres of sandy seafloor 0.3 mile offshore to enhance marine ecological resources. Sand, nodular phosphorite, oil, and gas are mineral resources that could possibly be affected by the Project; however, mineral mining and extraction does not occur at the site, and there are no known plans for future mining or extraction.

Construction of the rocky reef would involve the use of quarry rock, an important mineral resource that becomes an important aggregate commodity once it is ground finely. The Project would diminish, to some extent, the availability of quarry rock in the region, as the Project is proposing to use 70,000 standard tons of quarry-rock material. Because of the relatively small size of this Project, only 0.06 percent of the total production of construction aggregate in the State and 0.6 percent of the Los Angeles County PCC-grade resources would be used during construction. Currently, no State standards dictate the rate at which aggregate resources can be consumed. Additionally, there are few sites in California conducive to sand or gravel extraction, and the

1 Project site is not listed as a potential extraction site. Thus, this Project would not result in the loss
2 of availability of quarry rock that would be of value to the region and the residents of California.

3 Sand is a known mineral resource that is mined in southern California for beach enhancement.
4 While the Project would inhibit future sand extraction within the 69-acre site, sand at the site is
5 sparse (which is necessary to keep the quarry rock from sinking and becoming buried) in
6 comparison with many other areas along the southern California coastline that could be available
7 for mining. For this reason, the Project site is not believed to contain sand in quantities that would
8 be of substantive value to the region or to the residents of California.

9 There has also historically been interest in mining nodular phosphorite along the southern
10 California coast to be used to produce fertilizer, but with no resulting commercial extraction.
11 Because there are many other sites available and no commercial mining in the foreseeable future,
12 the Project is considered to not have a significant effect in reducing the availability of phosphorite
13 in California.

14 Offshore oil and gas extraction is also a potential use for the Project site. There are many
15 constraints on developing nearshore sites for oil and gas extraction, but apart from these
16 constraints, the placement of 40 acres of quarry rock on the 69-acre Project site would not preclude
17 development of the site for oil and gas production.

18 For these reasons, the Project would not significantly affect mineral resource availability for the
19 region or residents of California. Therefore, the impact would be less than significant.

20 *b) Result in the loss of availability of a locally important mineral resource recovery site*
21 *delineated on a local general plan, specific plan or other land use plan?*

22 **No Impact.** The Project site has not been delineated in any local plans as an important mineral
23 resource recovery site; therefore, there would be no impact.

24 **11.4 Mitigation Summary**

25 The Project would not result in significant impacts to mineral resources; therefore, no mitigation
26 is required.

12.0 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

12.1 Environmental Setting

12.1.1 Measuring Noise

Noise is generally defined as an unwanted or objectionable sound. Noise can cause annoyance, interference with communication, sleep disturbance, or in severe cases, hearing impairment. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighted scale adjusts the actual sound power levels in order to be consistent with human hearing response, since the human ear is not equally sensitive to sound at all frequencies. Table 5-7 of the DEA outlines common noise terms and their definitions.

The sound pressure level is measured on a logarithmic scale with the 0-dB level based on the lowest detectable sound pressure level that people can perceive. Based on the logarithmic scale, a doubling of sound intensity is equivalent to an increase in 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on the ambient noise. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud).

According to the U.S. Environmental Protection Agency, impairment of the human ear begins at about 70 dBA. Noise levels above 35 to 45 dB would disturb a sleeping person; noise levels

1 between 50 and 60 dB can make it difficult to carry on a quiet conversation; and noise levels above
2 85 dB can produce stress reactions (City of Rancho Palos Verdes 2013c). Table 5-8 of the DEA
3 outlines the sound levels of common noise sources.

4 12.1.2 Existing Noise Levels

5 The City of Rancho Palos Verdes General Plan–Noise Element (2013c) describes existing noise
6 levels and sources in the City. Ambient noise monitoring within the city has shown that ambient
7 noise levels are generally between 42.4 and 75 dBA. Ambient noise levels in the city come from
8 two major sources: transportation and community noises. Areas that are sensitive to noise, called
9 sensitive-use areas, include residences, schools, churches, and medical facilities.

10 Transportation noises include automobiles, trucks, motorcycles, buses, trains, and planes. The
11 most common sources of noise in the Project area are traffic-related, stemming from automobiles,
12 trucks, and motorcycles. Traffic noises within the city range from moderate to high. Traffic noises
13 are considered moderate if the 70-dBA current noise equivalent level (CNEL) contour is confined
14 within the roadway right-of-way, but the 65 and 60 dBA CNEL contours extend beyond the right-
15 of-way. Traffic noises are considered high if the 70, 65, and 60 dBA CNEL contours extend
16 beyond the roadway right-of-way. Moderate traffic noises come from Highridge Road, Indian Peak
17 Road, Miraleste Drive, Palos Verdes Drive (South, East, and West), Silver Spur Road, Crest Road,
18 Crestridge Road, Western Avenue, and portions of Crenshaw Boulevard and Hawthorne
19 Boulevard. High traffic noises originate from some parts of Hawthorne Boulevard and the majority
20 of Crenshaw Boulevard.

21 The City of Rancho Palos Verdes is served by four regional and sub-regional transit providers;
22 however, the contribution of bus transportation to traffic-related noise levels is low. No railroad
23 lines lie within or abut the City, although rail traffic from the Port of Los Angeles may be audible
24 on the City's east side. Therefore, the contribution of rail traffic to ambient noise levels is low.
25 There are three airports near the City. These include Los Angeles International Airport, Torrance
26 Zamperini Field, and Long Beach Daugherty Field. From these three airports, there are no
27 designated take-off or approach paths over the City; thus, these noise impacts are also fairly low.

28 Community noise sources include both constant noises and single-event noises. Constant noises
29 include noises generated from traffic; from activities around service stations, Golden Cove Center,
30 Peninsula Center, and the commercial strip along Western Avenue; and from other non-residential
31 uses in the community. Constant noises also include noises from construction, such as from the
32 operation of bulldozers and heavy trucks and from the pounding of hammers. Single-event noises
33 include noises that are infrequent, but that may be louder and more intrusive than constant noises.
34 These may include noise sources such as a plane flying overhead, barking dogs, or a loud
35 motorcycle.

36 In addition to transportation and community noises, the sound produced by the ocean surf
37 contributes to the measured noise levels of the coastal zone. The sound of the ocean surf can vary

depending on the tides and weather conditions. At a point 50 feet from the surf line, gentle lapping waves could produce about 20 dBA, while large waves and surf would produce about 55 dBA. The nominal value under normal conditions is around 40 dBA.

12.1.3 Land Use Patterns near the Project Site

Land uses near the Project site within the City of Rancho Palos Verdes include RS-1 (residential single lot greater than 1 acre), RS-2 (residential single lot greater than 20,000 square feet), RS-5 (residential single lot greater than 8,000 feet²), RPD (residential planned development), OH (open space–hazard), and OR (open space–recreational). The majority of the land just inshore of the Project site is designated RS-1, which includes a golf club. A small portion of RS-5 is present at the northeastern boundary of the golf club. A small strip of land designated as OH lies between the RS-1 and RPD areas and the Pacific Ocean. In this area is the Ocean Trails Reserve, which consists of a series of pedestrian and bike trails. A small area of OH mixed with OR lies in the northeastern area of the Ocean Trails Reserve. Inland of these areas is a mix of residential (RS-4 and RS-5), OH, and I (institutional) designations (City of Rancho Palos Verdes 2013b). Table C-5 outlines the distances from the nearshore boundary of the Project site to the various land-use designations.

Table C-5. Distances from Project Site to Various City Land Use Designations

Land Use Pattern in City of Rancho Palos Verdes	Distance from Project Site (feet) ¹
Open Space: Ocean Trails Reserve	1,246
Residential Single Lot: Trump National Golf Club	1,709
Residential Single Lot: North of Palos Verdes Drive	2,500
Open Space: Royal Palms/White Point County Park	4,950
Sensitive Use Area: School library, Mira Catalina Elementary School	7,257

Note:

¹ Distances were taken from the nearshore boundary of the project site in order to reflect the least amount of distance from the project site to onshore land uses.

12.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to noise and the Project are identified in Attachment 1. Various entities address this issue area at the local level, as discussed below.

The County of Los Angeles General Plan–Noise Element (2015) addresses various noises and sources throughout the County, specifically focusing on sources such as traffic, railroad, and aircraft. The guidelines used by the County are based on the community noise compatibility guidelines established by the State of California’s Department of Health Services. Regulations that implement these guidelines are set forth in the Los Angeles County Code. Section 12.08.440 of the County of Los Angeles Noise Ordinance prohibits construction during weekday evening and

nighttime hours from 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real-property line. The ordinance sets specific limits for construction noise affecting existing structures during daytime hours from 7:00 a.m. to 7:00 p.m., varying by the day and type of structure. On weekdays, the noise limit for: single-family residences is 75 dBA; multi-family residences is 80 dBA; and commercial structures is 85 dBA. On Sundays and legal holidays, the noise limit for: single-family residences is 60 dBA; multi-family residences is 64 dBA; and commercial structures is 70 dBA.

The City of Los Angeles General Plan–Noise Element (1999) establishes standards to ensure that sources of noise in the City do not create an unacceptable noise environment. Noises are categorized as A (normally acceptable), C (conditionally acceptable), N (normally unacceptable), and U (clearly unacceptable). Where a land use is denoted as “A” for the given CNEL noise environment, the highest noise level in that range should be considered the maximum desirable for conventional construction that does not incorporate any special acoustic treatment. The acceptability of noise environments classified as “C” or “N” depends on the anticipated amount of time that would normally be spent outside of the structure and the acoustic treatment to be incorporated into the structure’s design. Generally, for single-family residential areas, normally acceptable noises include noises up to 50 dBA. For multi-family residential areas, up to 55 dBA is considered normally acceptable, and for playgrounds and parks, up to 65 dBA is considered normally acceptable.

For the City of Rancho Palos Verdes, as outlined in the City of Rancho Palos Verdes General Plan–Noise Element (2013c), there is, in general, a 65-dB limitation on mechanical equipment at the closest property line; however, the operation of mechanical equipment can exceed 65 dBA on commercial properties that abut a residential district between the hours of 7 a.m. and 7 p.m., Monday through Saturday. The City of Rancho Palos Verdes acknowledges that short-term noise impacts from construction would be higher than existing ambient noise levels, with typical maximum noise levels reaching up to 91 dBA at 50 feet during construction. In order to reduce construction noise levels, the City has measures to reduce potential construction noise impacts. These include:

- Equipping all construction equipment with properly maintained mufflers, consistent with manufacturers’ standards.
- Placing all stationary equipment so that emitted noise is directed away from sensitive receptors nearest the project site
- Locating equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site.
- Constructing temporary sound barriers/walls to dampen the noise attenuation effect.

The City of Rancho Palos Verdes General Plan–Urban Environment Element (1975) identifies the following relevant noise policies:

- Policy 1: Mitigate impacts generated by steady-state noise intrusion (e.g., land strip buffers, landscaping, and site design).
- Policy 2: Develop an ordinance to control noise.
- Policy 3: Regulate land use so that there is a minimal degree of noise impact on adjacent land uses.
- Policy 7: Maintain current and up-to-date information on noise control measures, on both fixed point and vehicular noise sources.
- Policy 11: Encourage the state and federal governments to actively control and reduce vehicle noise emissions.

12.3 Impact Analysis

a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact. The completed rocky reef would be a passive, submerged feature that would not generate noise; however, noise would be generated during construction of the rocky reef as a result of construction-related vessels and equipment. Construction noise would occur during the 40- to 60-day construction period and would be generated during daylight hours only (Monday through Saturday). While the placement of quarry rock on the barge and seafloor would occur during the day, transportation of the quarry rock to the Project site may occur at night.

Table C-6 outlines the equipment that would be used for this Project, and shows the noise levels at various distances from the source. The rock quarry and docks at Santa Catalina Island are developed industrial facilities that are currently being operated under the regulatory oversight of the County of Los Angeles, including the County's noise control ordinances. In general, the median noise level in the vicinity of the quarry is expected to be about 45 dBA when equipment is not being operated. When equipment is being operated, the median noise levels would be expected to increase to levels of about 50 to 60 dBA.

Construction equipment and quarry rock transportation would produce noise ranging from 51 to 60 dBA as measured at the shoreline (1,600 feet away from the Project site; the closest residence/sensitive use area is 1,709 feet from the Project site [see Table C-5]). These levels would not be highly distinguishable from the ambient noise levels along the beaches and coastal roads, and would not exceed the acceptable noise range outlined in the City of Rancho Palos Verdes General Plan–Noise Element (2013c) for the affected coastal land use pattern. As a result, while Project construction would contribute to noise levels in the area, it would not generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, the impact would be less than significant.

Table C-6. Estimated Noise Levels from Project Equipment

Operation	Equipment	Hours of Operation	Quantity	Sound Levels at Maximum Engine Power with Mufflers at Indicated Distances (dBA)				
				100 Feet	200 Feet	400 Feet	800 Feet	1600 Feet
Towing barge/ anchor positioning/ standby	Tugboats	8	2	84	78	72	66	60
Positioning system	Diesel engine	9	1	81	75	66	60	54
Power-up during operation hours	Generator	9	1	75	69	63	57	51
Scoop and drop rock from barge	Tracked loader	8	1	79	73	67	61	55
Hoist track loader onto rock barge	Derick cranes	1.5	1	82	76	70	64	58
Maneuver items on derrick barge platform	Bulldozer	1	1	82	76	69	63	57

b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Less Than Significant Impact. The Project involves placing quarry rock on the seafloor 0.3 mile offshore. The impact of the quarry rock on the seafloor would be dampened by the water column, and any vibration would be highly localized and not perceptible either on site or along the coastline. For this reason, the Project was determined to not expose persons to or generate excessive ground-borne vibration or noise. Therefore, the impact would be less than significant.

c) Result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?

No Impact. See answer to *a)* above. The completed rocky reef would be a passive, submerged feature that would not generate noise. While noise would be generated during the construction of the rocky reef, it would be minor and temporary. As a result, this Project would not result in a permanent increase in ambient noise levels in the Project vicinity. Therefore, there would be no impact.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?

Less Than Significant Impact. See answer to *a)* above.

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?*

f) *For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?*

e) and f) No Impact. The Project, which is located 0.3 mile offshore, is not located within 2 miles or in the vicinity of a public airport or private airstrip; therefore, there would be no impact.

12.4 Mitigation Summary

The Project would not result in significant impacts to noise; therefore, no mitigation is required.

13.0 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

13.1 Environmental Setting

The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula in Los Angeles County. Inshore of the Project site is the City of Rancho Palos Verdes. According to the 2010 census, the population in the City of Rancho Palos Verdes was 41,943, which represented a 1.21 percent growth rate since 2000. In that census, there were 15,763 reported households. The population growth rate was, and still is, much lower than both the State's average growth rate of 9.99 percent and the national average growth rate of 9.71 percent (U.S. Census Bureau 2014).

13.2 Regulatory Setting

No federal, state, or local laws relevant to this issue area are applicable to the Project.

13.3 Impact Analysis

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project involves the placement of quarry rock on the seafloor 0.3 mile offshore to enhance marine ecological resources. The Project would not create any infrastructure or other structures or facilities. For this reason, the Project does not have the potential to induce substantial population growth. Therefore, there would be no impact.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

1 **b) and c) No Impact.** The Project involves the placement of quarry rock on the seafloor 0.3 mile
2 offshore to enhance marine ecological resources. The Project would not displace existing housing
3 or substantial numbers of people, nor would it necessitate the construction of replacement housing
4 elsewhere. Therefore, there would be no impact.

5 **13.4 Mitigation Summary**

6 The Project would have no impacts to population and housing; therefore, no mitigation is required.

14.0 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

14.1 Environmental Setting

The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula in Los Angeles County. Inshore of the Project site is the City of Rancho Palos Verdes. Onshore and offshore service providers are listed below in Table C-7.

Table C-7. Summary of Public Service Providers

Service	Provider(s)
Fire Protection	City of Los Angeles Fire Department
Police Protection	City of Los Angeles Police Department
Parks	City of Los Angeles Department of Parks and Recreation
Other: Maritime Law Enforcement	Los Angeles County Sheriff's Harbor Patrol U.S. Coast Guard

Due to the offshore location of the Project, the following discussion focuses on the offshore emergency response services that would be needed in the event of a fire, collision, or accident onboard vessels or barges at the Project site. In the City of Rancho Palos Verdes and Los Angeles County, these services are provided by: (1) the U.S. Coast Guard, (2) Los Angeles County lifeguards, and (3) the Los Angeles County Sheriff's Department's Harbor Patrol. While these organizations all work together, each has a unique role.

- The U.S. Coast Guard is the federal government's primary maritime law enforcement agency and is responsible for ensuring overall safety and security in the marine environment. The U.S. Coast Guard responds to boat emergencies that occur more than 3 nm offshore, and will assist within 3 nm if requested by other agencies. The closest U.S. Coast Guard stations to the Project site are at the Ports of Los Angeles and Long Beach.
- Lifeguards at state beaches and at beaches in the cities of Los Angeles and Rancho Palos Verdes respond to distress calls primarily from people swimming or surfing near shore, as well as from some boaters. Additionally, there are highly trained Ocean Lifeguard Specialists with Los Angeles County Fire Department's Underwater Rescue and Recovery

Unit Dive Team, who respond to missing swimmers and divers, sinking (or sunken) vessels, and aircraft in the water. Non-emergency boating problems, such as engine problems or equipment failure, are handled through a private service in the area.

- The Los Angeles County Sheriff's Harbor Patrol Port Police responds to all emergencies within 3 nm of the Los Angeles County shoreline, and is the first point of contact for vessel emergencies. The Harbor Patrol regularly patrols the offshore area and has a fire boat on duty 24 hours a day. If a physical injury occurs, the Patrol calls paramedics to assist either onshore or at the site of the accident. The Harbor Patrol also calls the City of Los Angeles, City of Rancho Palos Verdes, and state beach lifeguards for help as necessary. The Harbor Patrol also has a scuba dive team that serves as an underwater unit, which polices the area within and around the Port of Los Angeles. On occasion, the dive team would assist the U.S. Coast Guard with investigating spills, accidents, and suspicious incidents.

14.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to public services and the Project are identified in Attachment 1. No local laws relevant to this issue area are applicable to the Project.

14.3 Impact Analysis

a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?

- *Fire protection?*
- *Police Protection?*
- *Schools?*
- *Parks?*
- *Other public facilities?*

No Impact. The Project involves the placement of quarry rock on the seafloor 0.3 mile offshore to enhance marine ecological resources. Project construction is short-term and would not require any additional services outside of those mentioned above and currently available. Furthermore, the nature of the completed rocky reef is such that it would not require or affect governmental services, such as fire protection, or public facilities, such as schools. Therefore, there would be no impact.

14.4 Mitigation Summary

The Project would have no impacts to public services; therefore, no mitigation is required.

1 **15.0 RECREATION**

Would/does the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Would the Project substantially interfere with recreational surfing activities or have a substantially adverse effect on surfers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Would the Project substantially interfere with recreational diving activities or have a substantially adverse effect on divers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2 **15.1 Environmental Setting**

3 The Project is located offshore of the Palos Verdes Peninsula, which is a unique natural resource
 4 that attracts many recreational users because of its natural beauty, temperate climate, beaches,
 5 wildlife, and location near a large metropolitan complex. However, landslides are prevalent, and
 6 many of the coastal areas are categorized as “hazardous open space,” which is deemed
 7 undevelopable. Many of these areas have been made into parks that the public can use for a variety
 8 of recreational activities.

9 Inshore of the Project area is the City of Rancho Palos Verdes, which includes multiple locations
 10 that the public can use for recreation, including: (1) Abalone Cove Shoreline Park, (2) Ocean Trails
 11 Reserve, (3) Trump National Golf Club, (4) Royal Palms/White Point County Beach, (5) White
 12 Point Nature Reserve, (6) Point Fermin Park, and (7) Angels Gate Park. These open-space areas
 13 contain trails and roads, and some allow access to the beaches through trails that lead down the
 14 coastal bluffs. Abalone Cove Reserve, Ocean Trails Reserve, White Point Nature Reserve, and
 15 Point Fermin Park feature parking areas and hiking trails that enable recreational users to access
 16 the beach. These access points are used for surfing, diving, and fishing, tidepooling, hiking the
 17 bluffs, wildlife viewing, and other recreational purposes.

18 **15.2 Regulatory Setting**

19 Federal and state laws and regulations pertaining to and relevant to recreation and the Project are
 20 identified in Attachment 1. Various entities address this issue area at the local level, as discussed
 21 below. No local laws relevant to this issue area are applicable to the Project.

1 **15.3 Impact Analysis**

2 This section addresses potential impacts on recreational facilities. It should be noted that the two
3 checklist questions do not address potential effects on recreational fishing or other recreational
4 activities, such as the potential for the Project to diminish the quality of visual resources that
5 support onshore recreational activities, including beach activity. Potential impacts on onshore
6 recreational activities are discussed in Section 1.0, Aesthetics; potential conflicts with recreational
7 boat traffic are discussed in Section 16.0, Transportation/Traffic; and potential impacts on
8 recreational fishing are discussed in Section 20.1, Commercial and Recreational Fishing.

9 ***a) Increase the use of existing neighborhood and regional parks or other recreational facilities***
10 ***such that substantial physical deterioration of the facility would occur or be accelerated?***

11 **No Impact.** During Project-related construction, workers may use nearby park and recreation
12 facilities in the short term; however, due to the limited number of workers and the short-term
13 nature of the Project, the Project would not increase the use of existing parks or recreational
14 facilities such that substantial physical deterioration of the facilities would occur or be accelerated.
15 Additionally, the enhanced ecological conditions resulting from the Project could lead to improved
16 recreating in the area, including recreational angling and diving; however, it is not anticipated that
17 this would increase the use of existing nearby parks or recreational facilities such that substantial
18 physical deterioration would occur or be accelerated. Therefore, there would be no impact.

19 ***b) Include recreational facilities or require the construction or expansion of recreational***
20 ***facilities which might have an adverse physical effect on the environment?***

21 **No Impact.** See answer to *a)* above. Furthermore, the Project does not include the construction or
22 expansion of recreational facilities. Therefore, there would be no impact.

23 ***c) Would the Project substantially interfere with recreation surfing activities or have a***
24 ***substantial adverse effect on surfers?***

25 **Less Than Significant Impact.** For many beachgoers, the Palos Verdes Peninsula is known as the
26 crown jewel of Los Angeles when it comes to surfing. There are many surfing breaks in the Palos
27 Verdes Peninsula area, and near the Project site, due to rock points and the Redondo Submarine
28 Canyon, which funnels swells towards Palos Verdes. During Project construction, marine vessels
29 and construction equipment would be located approximately 0.3 mile offshore in water depths of
30 15 to 21 m. The surfing breaks near the Project site are much closer to shore, in water depths not
31 exceeding 5 m. Therefore, Project construction would not impact surfers or surfing activities.

32 The restoration of 69 acres of rocky-reef substrate offshore of surfing breaks on the Palos Verdes
33 Peninsula has the potential to influence the size, shape, and direction of these breaks, which could
34 create a significant effect on nearby surfing conditions. However, Elwany et al. (1998) concluded
35 that reefs and the associated kelp forests would not change the measurable attenuation of height or

energy of long-period swell waves, nor would they affect the propagation or direction of swell waves. They also concluded that the construction of a reef would not substantially affect the distribution and transport of sediment in the littoral zone, nor the width of the beach. They determined that kelp forests dampen the effects of high-frequency sea waves, which are generated by local onshore winds and result in surface chop or roughness. These rough, choppy conditions are generally not favorable for surfing. Since the presence of a kelp forest would reduce these conditions, resulting in a smooth, glassy sea surface, it would actually have a beneficial effect on surfing. Based on the research performed by Elwany et al. (1998), the rocky-reef habitat and associated kelp forest should not influence the size, shape, and direction of waves near the Project site. Therefore, the restored reef would have a less than significant impact on surfing.

d) Would the Project substantially interfere with recreational diving activities or have a substantial adverse effect on divers?

Less Than Significant Impact. Construction of the reef would occur over a 40- to 60-day period, with construction paced at 1 acre per day, to place quarry rock on 40 acres within the 69-acre Project site. The Project site is located in an area known for diving, and as a result of Project construction, divers would be temporarily excluded from a daily 1-acre site within the Project area; the rest of the Project area and the extensive adjacent coastal waters would remain available during this period. Additionally, there are many other diving sites along the Palos Verdes Peninsula that divers can use during reef construction. To notify divers of Project activities and the lease/buffer zone around the Project site, a Local Notice to Mariners would be submitted to the U.S. Coast Guard Waterways Branch. The notice would also include information about the purpose of the Project, construction activities and timeframes, and any potential safety hazards to the public. Currently, the Project site contains substantial areas of buried reef, which are not conducive to recreational diving. Once completed, the Project would provide additional diving sites along the Palos Verdes Peninsula. The addition of limiting hard substrate should provide suitable habitat for the growth of giant kelp (*Macrocystis pyrifera*), as well as additional habitat for fish species, leading to a more productive, biologically diverse reef that would be more attractive to recreational divers. Given the information above, this impact would be less than significant.

15.4 Mitigation Summary

The Project would not result in significant impacts to recreation; therefore, no mitigation is required.

1 **16.0 TRANSPORTATION/TRAFFIC**

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **16.1 Environmental Setting**

3 The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos
4 Verdes Peninsula in Los Angeles County. Inshore of the Project site is the City of Rancho Palos
5 Verdes, and approximately 1.3 miles northeast of the Project site is the City of San Pedro. For this
6 Project, regional transportation networks would include both ground and waterborne
7 transportation. Ground transportation would include the commuting of construction workers to the
8 Cabrillo Marina via roadways at or near the City of San Pedro, where they would board a crew
9 boat that would take them to the offshore Project site. Waterborne transportation would involve
10 vessels commuting to the Project site from the Catalina Island quarry, the Cabrillo Marina, and the
11 Ports of Los Angeles and Long Beach.

12 **16.1.1 Ground Transportation**

13 Ground transportation would be limited to the roadways in and around San Pedro, which would
14 be used by construction workers traveling to the Cabrillo Marina. Ground transportation would be
15 limited to approximately 15 vehicles carrying reef construction workers to the Cabrillo Marina in

San Pedro for pickup by crew boat. Because the reef materials would be transported entirely by waterborne craft, there would be no truck hauling of such materials on public roadways.

Potential Roadways Used by Project and Workers

Potential roadways that could be used by reef construction workers include: (1) Interstate 710 (Long Beach Freeway); (2) Interstate 110 (Harbor Freeway); (3) Seaside Freeway; (4) South Harbor Boulevard; (5) Pacific Avenue; (6) West 22nd Street; and (7) Via Cabrillo Marina Street. Smaller roadways within the City of San Pedro that may be used by commuting construction workers would include South Harbor Boulevard, Pacific Avenue, West 22nd Street, and Via Cabrillo Marina Street.

Existing Traffic Volumes

Year 2013 data from the California Department of Transportation (Caltrans) show that the annual, average daily traffic volume for the Seaside Freeway is 51,000 vehicles per day (vpd); for Interstate 710 north of the Seaside Freeway junction, it is 59,000 vpd; and for Interstate 110 at the Seaside Freeway junction, it is 68,000 vpd (Caltrans 2013).

16.1.2 Waterborne Transportation

Waterborne transportation for the Project would include: (1) the transport of quarry rock via tugboat-pulled barges from Santa Catalina Island to the Project site; (2) transport of crew members by crew boat from the Cabrillo Marina to the Project site; and (3) transport of the marine construction fleet to the Project site from either the Port of Los Angeles or the Port of Long Beach.

- Waterborne Transport of Quarry Rock: Quarry rock used in the construction of the reef would be obtained from the Pebbly Beach and Empire Quarries on Santa Catalina Island (see Section 11.0, Mineral Resources). Using quarry rock from these sources would require a minimal amount of trucking, of up to 0.25 mile from the quarries to the loading dock. These trucks operate on property roads owned by the quarries and are part of the existing permitted operations. The quarry rock would then be loaded onto two supply barges and would be pulled by tugboat 26 nm to the Project site for a total of 18 round trips.
- Waterborne Transport of Construction Workers: An estimated 15 construction workers would be transported daily from the Cabrillo Marina to the Project site and back by crew boat, for a round trip distance of approximately 14 nm. The crew boat would be docked at the public docks at the Cabrillo Marina or at a permanent berth at the Port of Los Angeles or Port of Long Beach.
- Waterborne Transport of Construction Equipment: The marine construction fleet for reef construction would include: (1) a derrick barge (construction barge), (2) two tugboats, and (3) four supply barges. The marine construction fleet would come from either the Port of Los Angeles or the Port of Long Beach, traveling approximately 10 nm from either port to

the Project site. Once anchored offshore, the marine construction fleet would remain offshore for the duration of the construction period unless inclement weather caused it to return to port.

Additionally, Project-related barges and tugboats may be anchored temporarily at the Port of Los Angeles or the Port of Long Beach during inclement weather, as well as to store excess rock material and transport it back to the Project site once the weather is favorable for reef construction.

Existing Waterborne Transportation Networks

The waterborne transportation network for this Project includes the area from Santa Catalina Island to San Pedro Bay, which encompasses approximately 130 square miles. Because of the proximity of this region to the Ports of Los Angeles and Long Beach, the major shipping lanes contain substantial commercial traffic. In addition, recreational vessels are docked at the 19 marinas within these ports, which hold a total of 7,665 boat slips. There are also many yacht clubs in the area to facilitate recreational boating. Additionally, the proximity of these marinas to Santa Catalina Island makes them popular docking spaces for recreational vessels.

16.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to transportation/traffic and the Project are identified in Attachment 1. No local laws relevant to this issue area are applicable to the Project.

16.3 Impact Analysis

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. Ground transportation would include the commuting of construction workers to the Cabrillo Marina via roadways at or near the City of San Pedro, where they would board a crew boat that would take them to the Project site. Commuters traveling to the Cabrillo Marina would use roads designated as: Freeways, Class II Major Highways, Secondary Highways, and Local Streets. Only one local street is estimated to be used by commuting workers, which includes Via Cabrillo Marina Street. Considering that the construction of the reef would only require an estimated 15 employees, and thus, a maximum of 15 additional cars on these roadways, this should not cause a significant increase in traffic in relation to the existing traffic volume, nor should it cause a substantial increase in vehicular movement. Therefore, this is considered a less than significant impact to intersections, streets, highways, and freeways.

The City of San Pedro Community Plan (City of Los Angeles Department of City Planning 2012), defines priority streets within the City. Priority street designations include: pedestrian, bicycle, public transit, motorized vehicles, and goods movement streets. The only street designation with a bicyclist or pedestrian designation is Pacific Avenue, which is designated as a pedestrian street. Because Pacific Avenue is a Secondary Highway, it is designed to have sidewalks with a minimum of 10 feet (City of Los Angeles Department of City Planning 2012). Since this road has infrastructure in place for pedestrians, the addition of a maximum of 15 extra vehicles per day on this road is considered a less than significant impact to pedestrians or bicyclist paths.

Construction workers traveling to the Cabrillo Marina who live in San Pedro could also use the Port of Los Angeles Waterfront Red Car Line, which provides clean electric powered rail transport along the San Pedro Waterfront and which travels down Harbor Boulevard. However, the number of new users would be minimal and impacts to mass transit are considered less than significant.

Waterborne transportation routes that would be used for Project construction include: (1) routes between Santa Catalina Island and the Project site; (2) routes from the Cabrillo Marina to the Project site; and (3) routes from the Port of Long Beach or Port of Los Angeles to the Project site. For the route between Santa Catalina Island and the Project site, one tugboat would tow two 2,000-ton capacity barges at a time from Catalina Island to the Project site through 18 roundtrips. This is expected to occur over a 24-hour period during the entire construction time frame. For the routes from the Cabrillo Marina to the Project site, one boat would travel daily to transport crew to and from the Project site to the Cabrillo Marina. For the routes from the Port of Long Beach or Los Angeles to the Project site, a derrick barge and attending tugboat would be moved from the ports to the Project site at the initiation of construction and completion of construction. Waterborne travel associated with construction would be located out of established shipping lanes in the area and would therefore not interfere with existing waterborne traffic. As a result, this impact would be less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. Pursuant to the Los Angeles County Congestion Management Program (CMP), administered by the Los Angeles County Metropolitan Transportation Authority, a traffic impact analysis is required at the following:

- CMP arterial monitoring intersections, including freeways on- or off-ramps, where the Project would add 50 or more trips per day during either the a.m. or p.m. weekday peak hours (8:00 a.m. to 5:00 p.m.).
- CMP freeway monitoring locations where the Project would add 150 or more trips per day during either the a.m. or p.m. weekday peak hours.

Construction activities would involve approximately 15 workers per day for a period of approximately 60 days. Therefore, this is under the criteria for CMP freeway or intersection monitoring. Therefore, there would be no impact.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The Project involves the construction of a fully submerged rocky reef, and the construction of the reef would not include any equipment that would present a risk to air traffic. The very nature and location of the Project precludes the potential for air traffic-related safety issues. Furthermore, no air travel is associated with the Project. Therefore, there would be no impact.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The Project involves the construction of a fully submerged rocky reef 0.3 mile offshore, and does not involve roadways or roadway design that would increase hazards due to a design feature or incompatible uses; therefore, there would be no impact.

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

e) and f) No Impact. See answer to *d)* above.

16.4 Mitigation Summary

The Project would have no impacts to transportation/traffic; therefore, no mitigation is required.

17.0 TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

17.1 Environmental Setting

17.1.1 Background

Evidence of the first human occupation of southern California was seen between 15,000 and 10,000 years ago, in the Pleistocene epoch (Moratto 1984, cited in Port of Los Angeles 1984). A number of submerged archaeological sites have been located off the coast of southern California. Many of these sites contain a variety of prehistoric artifacts, including manos, mutates, choppers and pestles (Weinman and Stickel 1978; Bickel 1978; URS Corporation 1986). Most of these known submerged archaeological sites and associated artifacts are located in relatively shallow water. Many of the shallow water sites may be a result of cliff erosion and are most likely associated with archaeological sites located on the cliffs above. Other submerged artifacts are the consequence of random loss and some may have been purposefully discarded in association with ceremonial rituals or other events.

17.1.2 Gabrielino/Tongva

When Spanish explorers and missionaries first visited the southern coastal areas of California, the indigenous inhabitants of the Los Angeles area (the Tongva) were given the Spanish name Gabrielino. Before the arrival of the Spanish explorers, the Palos Verdes area was home to the Tongva people, also known as the Gabrielinos. Before colonization of the Spanish in the 1700s, the population of the Tongva people was estimated at 200,000. By the late 1800s, only 6,000 remained (Bureau of Ocean Energy Management 2013; Welch 2006). Ethnographic information

1 indicates that the Gabrielino occupied the area between the Palos Verdes Peninsula and the Los
2 Angeles River as evidenced by the number of recorded village sites in each of these areas.

3 McCawley (1996, cited in Port of Los Angeles 2008) provides Gabrielino place names for the
4 peninsula, including Chaawvenga, Xuuxonga, Toveemonga, Aataveanga, Kiinkenga,
5 Toveemonga, and Haraasnga. McCawley also provides information for the village sites of
6 Swaanga and Ahwa Anga as located along the Los Angeles River closest to its junction with the
7 Pacific Ocean. These villages were occupied as late as the 1700s and early 1800s as evidenced by
8 notations in the baptismal registers of Mission San Gabriel (McCawley 1996, cited in Port of Los
9 Angeles 2008). Swaanga was documented as one of the larger, more substantial village sites
10 (McCawley 1996 citing Reid 1852, cited in Port of Los Angeles 2008). However, there is some
11 discrepancy as to the actual location of the village. McCawley (1996, cited in Port of Los Angeles
12 2008) cites Reid's (1852) notation that Swaanga was located at "Suang-na" suggesting that this
13 was still a recognizable place by 1852.

14 A local San Pedro historian provides a specific location for Suang-na as the side of the hill above
15 what is now Anaheim Street between the Harbor Freeway and Gaffey Street (Silka 1993, cited in
16 Port of Los Angeles 2008). Silka adds that the village was located near a crossing of major Native
17 American trails, which today is located at the intersection of Gaffey and Anaheim Streets, Vermont
18 Avenue and Palos Verdes Drive North, commonly called Five Points. McCawley (1996, cited in
19 Port of Los Angeles 2008) cites Reid (1852), stating that Chaawvenga is located on "Palos
20 Verdes." McCawley also cites Jose Zalvidea, stating that the name Tsauvinga applies to San Pedro
21 and that the village of Xuuxonga was located on the shore below San Pedro (Harrington 1986,
22 cited in Port of Los Angeles 2008). As documented, none of the recorded village sites is located
23 within the proposed Project area. However, given their proximity to the proposed Project area, it
24 was likely used by inhabitants of some or all of these villages.

25 The open waters along this coast, where the proposed Project is located, have long been used for
26 trade, transportation, fishing, and hunting. Prehistorically, offshore fishing by the
27 Gabrielino/Tongva tribe was accomplished from boats using line and hook, nets, basket traps,
28 spears, and poisons. Much of the fishing, shellfish harvesting, and fowling occurred along the
29 ocean shoreline. Sea mammals were taken with harpoons, spears, and clubs (Hudson and
30 Blackburn 1982, cited in Port of Los Angeles 2008).

31 17.1.3 Submerged Tribal Cultural Resources

32 A literature search of the known cultural sites in the Project area and within a 0.5-mile radius of
33 the Project site was conducted through the South Central Coast Information Center (South Central
34 Coast Information Center 2015). The search included a review of all recorded archaeological and
35 built-environment resources as well as a review of cultural resource reports on file. In addition,
36 California Points of Historical Interest, California Historical Landmarks, California Register of
37 Historical Resources, National Register of Historic Places, and California State Historic Properties
38 Directory listings were researched.

Results from a side-scan sonar survey conducted at the Project site in January 2014 (EcoSystems Management Associates 2014) did not reveal any anthropogenic structures on the seafloor. Subsequent surveys—a diver-based ground-truthing survey performed in April 2014 and an additional biological survey in March 2015—did not reveal any historical resources that may have been missed during the side-scan sonar survey.

These studies and surveys suggest that cultural resources do not exist at the Project site; however, there are several recorded sites onshore. Therefore, as a result of erosion and landslides in the area, these resources have the potential to have been transported to the Project site.

17.2 Regulatory Setting

Federal and state laws and regulations pertaining to and relevant to tribal cultural resources and the Project are identified in Attachment 1. At the local level, the City of Rancho Palos Verdes General Plan–Socio/Cultural Element (1975), includes a goal to preserve and protect its cultural resources, including all significant archaeological, paleontological and historical resources, and to promote programs to meet the social needs of its citizens. Policy 2, “encourage the identification of archaeologically sensitive areas and sites,” may also be relevant to the Project:

17.3 Impact Analysis

a) Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- (i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? or*
- (ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

No Impact. The Project site is located 0.3 mile offshore, between Bunker Point and White Point on the Palos Verdes Peninsula. The Project involves the placement of quarry rock on the seafloor to restore and enhance biological resources, and does not include excavation or the construction of any buildings or structures. There are no resources at the Project site that are listed or eligible for listing in the National Register of Historical Places or in a local register of historical resources. Additionally, there are no archaeological materials located on the site, nor are there historical materials such as those related to shipwrecks.

Assembly Bill (AB) 52 made changes to CEQA regarding tribal cultural resources and consultation with California Native American Tribes who have previously requested to be notified of projects in the geographic area traditionally and culturally affiliated with that tribe. Tribal cultural resources include sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a Tribe that is eligible under the California Register of Historic Resources or local register of historical resources. A tribal cultural resource can also be a resource that a lead agency determines, in its discretion and considering the significance of the resource to a Tribe, to be significant pursuant to criteria set forth in Public Resources Code section 5024.1. Under AB 52, lead agencies must avoid damaging effects to tribal cultural resources, when feasible, regardless of whether consultation occurred or is required.

To date, CSLC staff has not received written requests for notification from tribes whose geographic area of cultural affiliation overlaps with that of the Project; however, the Native American Heritage Commission (NAHC) provided a contact list of five Tribes that the CSLC should contact to gather information regarding the potential for tribal cultural resources within the Project area. CSLC staff notified these Tribes on October 18, 2016, to proactively engage with those tribes to ensure they have the opportunity to provide meaningful input on the Project's potential effects. On October 30, 2016, the Gabrieleño Band of Missions Indians notified the CSLC via email regarding the ancestral and traditional territories of the Kizh (Kite) Gabrieleño villages in the area. The Tribe also requested that an experienced and certified Native American monitor be on site during any and all ground disturbances. During subsequent communications with the Tribe's Chairman, CSLC staff explained that the quarry rock used to construct the rocky reef would be placed on top of the sediment and that no excavation would occur at the Project site. CSLC staff was also made aware of Toveemur Rock, a culturally significant and sacred site located offshore Point Vicente on the Palos Verdes Peninsula. Because Toveemur Rock is located more than 3 miles from the western boundary of the Project site lease area, the Project would not impact this sacred site. If the CSLC is notified of additional tribal cultural resources in the Project area, staff will consult with those tribes to ensure that impacts to tribal cultural resources remain less than significant. Furthermore, the NAHC searched its Sacred Lands File for Native American cultural sites and found no occurrences in the Project area (NAHC letter to the CSLC dated September 12, 2016).

In addition to a literature and records search (as described in Section 5.0, Cultural and Paleontological Resources), both side-scan sonar surveys and visual inspection by divers failed to detect the presence of human-made materials within the Project area. The 69-acre site is located in water depths where the sediment movement is dynamic and the sediment cover is thin (less than 3 feet). The site is also subject to strong currents that scour, move, and redeposit sand seasonally and as a result, it does not contain the older, more stable sedimentary deposits that have the potential to contain tribal cultural resources. As a result, there would be no substantial adverse change in the significance of tribal cultural resources. Therefore, there would be no impact.

17.4 Mitigation Summary

The Project would have no impacts to tribal cultural resources; therefore, no mitigation is required.

1 **18.0 UTILITIES AND SERVICE SYSTEMS**

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2 **18.1 Environmental Setting**

3 The Project is a short-term construction project involving the placement of quarry rock on the
 4 seafloor 0.3 mile offshore. The Project would not result in the construction of new utility or service
 5 systems, nor create a new demand for permanent utilities or service systems.

6 **18.2 Regulatory Setting**

7 No federal, state, or local laws relevant to this issue area are applicable to the Project.

8 **18.3 Impact Analysis**

- 9 *a) Exceed wastewater treatment requirements of the applicable Regional Water Quality*
 10 *Control Board?*
 11 *b) Require or result in the construction of new water or wastewater treatment facilities or*
 12 *expansion of existing facilities, the construction of which could cause significant*
 13 *environmental effects?*

1 **c) *Require or result in the construction of new stormwater drainage facilities or expansion of***
2 ***existing facilities, the construction of which could cause significant environmental effects?***

3 **a) through c) No Impact.** The Project involves the construction of a fully submerged rocky reef
4 0.3 mile offshore and would not generate wastewater. As a result, the Project would not exceed
5 wastewater treatment requirements of the applicable Regional Water Quality Control Board nor
6 would it result in the construction or expansion of water or wastewater treatment facilities. The
7 nature and location of the Project also preclude the need for new stormwater drainage facilities or
8 the expansion of such existing facilities. Therefore, there would be no impact.

9 **d) *Have sufficient water supplies available to serve the Project from existing entitlements and***
10 ***resources, or are new or expanded entitlements needed?***

11 **No Impact.** The Project involves the construction of a fully submerged rocky reef 0.3 mile
12 offshore. As a result, the nature and location of the Project preclude the need for a sufficient water
13 supply from existing entitlements or resources. Therefore, there would be no impact.

14 **e) *Result in a determination by the wastewater treatment provider which serves or may serve***
15 ***the Project that it has adequate capacity to serve the Project's projected demand in addition***
16 ***to the provider's existing commitments?***

17 **No Impact.** See answer to a) above.

18 **f) *Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid***
19 ***waste disposal needs?***

20 **g) *Comply with federal, state, and local statutes and regulations related to solid waste?***

21 **f) and g) No Impact.** The Project involves the construction of a fully submerged rocky reef 0.3
22 mile offshore, and there would be no solid waste produced as a result of the Project. The nature
23 and location of the Project preclude the need for solid waste disposal, and there would be no effects
24 related to local landfill capacity limits. Therefore, there would be no impact.

25 **18.4 Mitigation Summary**

26 The Project would have no impacts to utilities and service systems; therefore, no mitigation is
27 required.

19.0 MANDATORY FINDINGS OF SIGNIFICANCE

The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur.

Where prior to commencement of the environmental analysis a project proponent agrees to MMs or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an Environmental Impact Report solely because without mitigation the environmental effects would have been significant (per State CEQA Guidelines, § 15065).

Does the Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact. The Project would involve minor construction-related impacts, but is designed to substantially improve the quality of the marine environment by increasing habitat, biological diversity, and populations of fish and wildlife species. Further, there are no historic or pre-historic resources in the Project area. Therefore, impacts would be less than significant.

b) *Have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?*

Less Than Significant Impact. The Project involves the construction of a fully submerged rocky reef 0.3 mile offshore to enhance marine biological resources. The Project was determined to have less than significant impacts on the following resource categories: aesthetics, air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, and transportation and traffic.

- Aesthetics/Noise: Potential cumulative effects on visual aesthetics and noise are specific to location and timing since only the immediate project vicinity would be affected and only during the 40- to 60-day construction period.
- Air Quality: SCAQMD sets the individual project emissions permitting requirement thresholds to avoid significant emissions-related cumulative impacts. For this Project, cumulative construction-related air emissions are alleviated in considering that emissions would be miniscule with respect to the larger air basin and minor enough that there are no SCAQMD emissions-related permit requirements.
- Biological Resources: Potential concern over cumulative biological impacts is alleviated by the nature and purpose of the Project in that the minor impacts on benthic organisms during construction would be more than offset by the resulting substantial increases in biological population numbers and diversity.
- Hazards and Hazardous Materials/Hydrology and Water Quality: Cumulative impacts as a result of quarry rock and the use of potentially hazardous materials such as diesel fuel and other mechanical fluids would be alleviated through the implementation of material specification guidelines, emergency response plans, and oil spill prevention plans in accordance with local policies and plans.
- Transportation/Traffic: Potential concern over cumulative transportation and traffic impacts is alleviated by the offshore nature of the Project which would occur over a 40- to 60-day construction period. The Project would only require an estimated 15 employees and would not significantly traffic in relation to the existing traffic volume. Additionally, all waterborne routes that would be used by Project-related vessels would be located out of established shipping lanes in the area and would not interfere with existing waterborne traffic.

For any impacts to act cumulatively on any past, present, or reasonably foreseeable projects, these projects would have to have individual impacts in the same resources areas, some at the same time, or occur within an overlapping area as the Project. No such projects were identified during the site selection process or during consultation with federal, state, or local agencies. Therefore, this impact would be less than significant.

1 *c) Have environmental effects which will cause substantial adverse effects on human beings,*
2 *either directly or indirectly?*

3 **Less Than Significant Impact.** The Project involves the construction of a fully submerged rocky
4 reef 0.3 mile offshore to enhance marine biological resources. During construction of the rocky
5 reef, shoreline residents or visitors would be affected by temporary air emissions, aesthetic, and
6 noise impacts associated with the placement of the quarry rock on the seafloor. Because
7 construction is temporary (no more than 60 days) and the completed Project would be fully
8 submerged, these impacts were determined to be minor and not to cause substantial direct or
9 indirect adverse effects on human beings. Therefore, the impact would be less than significant.

20.0 OTHER MAJOR AREAS OF CONCERN

20.1 Commercial and Recreational Fishing

Coastal waters support both coastal and recreational fishing activities in the Project vicinity, and offshore construction activities associated with the Project have the potential to affect both commercial and recreational fisheries. Although this environmental issue is not included in the CEQA Appendix G Checklist, the CSLC is including it here due to the Project's location.

20.1.1 Environmental Setting

Commercial Fishing

The California Department of Fish and Wildlife keeps data on the quantity and value of various species caught by commercial fishers. These data are collected at designated "blocks" along the coast. Fishing blocks have a block ID, which is used to tie that spatial location with associated records, including commercial fishing, sport fishing, historical sport fishing, and recreational fishing. The blocks adjacent to and encompassing the Project site are No. 719 and No. 720. The lease area is entirely within Block No. 719. Together, Blocks 719 and 720 encompass the entire Palos Verdes Peninsula, a small portion of Santa Monica Bay, and northern San Pedro Bay. Block 719 covers a smaller marine area, mostly over the shelf, while Block 720 is above a deep canyon and channel waters.

The major commercial species caught in the Project vicinity are lobster, crab, sea urchin, and demersal fish, such as halibut. Lobster traps are set during a limited season that runs from the first Wednesday in October through the first Wednesday after March 15th of each year. Spider crabs and sea urchins may be fished all year; however, there is a size limit on what may be taken.

Recreational Fishing

Recreational fishing, particularly hook-and-line fishing, is popular in the vicinity of the Project site. Recreational boaters and commercial passenger fishing vessels originate primarily from King Harbor and Marina del Rey, which are located approximately 12 and 20 miles, respectively, northwest of the Project site. A smaller number of fishing vessels originate from the Ports of Long Beach and Los Angeles, approximately 4 miles south of the Project site. The most heavily fished area is from Malaga to Rocky Point, along the northwestern section of the Palos Verdes Peninsula. This is due to the high number of boats departing from King Harbor and the abundant reef and kelp habitat in the area. Rocky Point is the largest reef, and it has the most persistent kelp in the region, making it a very popular fishing destination (Pondella 2009). Other popular nearshore areas for fishing from vessels include Rocky Point, Point Fermin Reef, Long Point, and Point Vicente Cliffs (Davey's Locker 2014).

20.1.2 Impact Analysis

No federal or state significance criteria for impacts to commercial and recreational fisheries have been established and Appendix G of the State CEQA Guidelines does not list fisheries as a specific resource area. Given the prevalence and importance of recreational and commercial fishing in California, previous CSLC environmental analyses have evaluated the potential loss of available area, reduction of habitat, and/or substantial decrease in the number of organisms of commercial or recreational value as the basis for analyzing impacts. The criteria are generally based on what level of loss of access to fishing areas or seasons would be expected to substantially interfere with or adversely affect commercial or recreational fishers' livelihoods. For this assessment, a significant impact to commercial or recreational fisheries would occur if the following is expected.

a) Would the Project exclude fishermen from some or all of the proposed Project area and thereby significantly impact commercial or recreational fishing?

Less Than Significant Impact. Although Project construction would occur over a 40-to 60-day period, the daily Project footprint (1 acre) would be small and localized. Even though fishing would be excluded from this 1-acre construction site, the rest of the Project area and the extensive adjacent coastal fishing waters would remain available during this period. Additionally, Project construction would be complete prior to the start of the lobster season, which begins on October 1st. Once the rocky reef is complete, the entire Project area would be available for fishing. Therefore, this impact would be less than significant.

b) Would the Project alter the seafloor in such a manner so as to significantly reduce the availability of the Project area to commercial or recreational fisheries?

No Impact. The Project involves the placement of quarry rock on sandy seafloor areas to enhance marine biological resources, including species of interest to fishermen. Both commercial and recreational fishermen seek out the type of habitat that the Project would create because hard substrate is known to support relatively abundant and diverse marine life. Therefore, there would be no impact.

c) Would the Project result in loss or damage to commercial fishing gear?

No Impact. The Project involves the placement of quarry rock on the seafloor to create the type of rocky-reef habitat sought out by both commercial and recreational fishermen. There are no artificial structures or other potential obstructions proposed for the Project site that might increase the normal risk of loss or damage to commercial fishing equipment. Therefore, there would be no impact.

d) Would the Project substantially reduce Essential Fish Habitat required by one or more of the species managed by the Pacific Fisheries Management Council's fisheries management plans?

Less Than Significant Impact. The Project area contains Essential Fish Habitat (EFH) for a variety of fish species that are managed under coastal pelagic species, groundfish, and highly migratory species management plans, as well as two Habitat Areas of Particular Concern, rocky reef, and canopy kelp. The Project has the potential to affect bottom habitat and biological resources as a result of derrick barge anchoring at the Project site; however, an anchoring plan (see Appendix A) was developed to avoid anchoring in areas of hard substrate and minimize anchor drag, especially during inclement weather. While Project construction may have minor impacts on the existing degraded habitat, the completed rocky reef would yield a significant net expansion and improvement in the quality of fish habitat in the Project area. Ongoing consultation with NMFS combined with the anchoring plan would minimize potential impacts to EFH. Therefore, impacts would be less than significant.

20.2 CSLC Environmental Justice Policy

Environmental justice is defined by California law as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Senate Bill 115 [Stats. 1999, ch. 690]). This definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all of the people. The CSLC adopted an environmental justice policy in October 2002 to ensure that environmental justice is an essential consideration in the agency’s processes, decisions, and programs. Through its policy, CSLC reaffirms its commitment to an informed and open process in which all people are treated equitably and with dignity, and in which its decisions are tempered by environmental justice considerations. As part of its environmental justice policy, the CSLC pledges to continue and enhance its processes, decisions, and programs with environmental justice as an essential consideration by:

- Identifying relevant populations that might be adversely affected by CSLC programs or by projects submitted by outside parties for its consideration.
- Seeking out community groups and leaders to encourage communication and collaboration with the CSLC and its staff.
- Distributing public information as broadly as possible and in multiple languages, as needed, to encourage participation in the CSLC’s public processes.
- Incorporating consultations with affected community groups and leaders while preparing environmental analyses of projects submitted to the CSLC for its consideration.
- Ensuring that public documents and notices relating to human health or environmental issues are concise, understandable, and readily accessible to the public, in multiple languages, as needed.
- Holding public meetings, public hearings, and public workshops at times and in locations that encourage meaningful public involvement by members of the affected communities.

- Educating present and future generations in all walks of life about public access to lands and resources managed by the CSLC.
- Ensuring that a range of reasonable alternatives is identified when siting facilities that may adversely affect relevant populations and identifying, for the CSLC's consideration, those that would minimize or eliminate environmental impacts affecting such populations.
- Working in conjunction with federal, state, regional, and local agencies to ensure consideration of disproportionate impacts on relevant populations, by instant or cumulative environmental pollution or degradation.
- Fostering research and data collection to better define cumulative sources of pollution, exposures, risks, and impacts.
- Providing appropriate training on environmental justice issues to staff and the CSLC so that recognition and consideration of such issues are incorporated into its daily activities.
- Reporting periodically to the CSLC on how environmental justice is a part of the programs, processes, and activities conducted by the CSLC and by proposing modifications as necessary.

20.2.1 Methodology

The CSLC does not specify a methodology for conducting programmatic-level analysis of environmental justice issues. This analysis focuses primarily on whether the Project's impacts may affect areas of high minority populations and/or low-income communities disproportionately and thus would create an adverse environmental justice effect. For the purpose of the environmental analysis, the Project's inconsistency with the CSLC's environmental justice policy would occur if the Project would:

- Have the potential to disproportionately affect minority and/or low-income populations adversely; or
- Result in a substantial, disproportionate decrease in employment and economic base of minority and/or low-income populations residing in immediately adjacent communities.

20.2.2 Project Analysis

The Project's limited impact on the human environment is established in various sections of this appendix. The Project involves the construction of a fully submerged rocky reef 0.3 mile offshore, and is adjacent to open space, including beaches, a golf club, and unbuildable property subject to flooding. The closest residences are located on or adjacent to the golf club. Project construction activities would be limited to a 60-day period, and the only potential impacts to local residents, including aesthetics, air quality, and noise, would be less than significant. Less than significant: Given the small number of employees involved and the short construction period, the Project would have only a minor positive effect on employment, income, and economic activity.

- 1 Therefore, the Project would not adversely affect any populations, including minority or low-
- 2 income populations.

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Appendix C, Attachment 1

Abridged List of Major Federal and State Laws, Regulations, and Policies Potentially Applicable to the Project

Attachment A to this Initial Study and Environmental Checklist identifies the major **Federal and State** laws, regulations and policies (local/regional are presented in each issue area chapter) that are potentially applicable to the Project, organized by issue area in the order provided in the State California Environmental Quality Act Guidelines Appendix G (http://resources.ca.gov/ceqa/guidelines/Appendix_G.html).

Frequently Used Abbreviations	
§	section
°C	degrees Celsius
°F	degrees Fahrenheit
AB	Assembly Bill
BCDC	San Francisco Bay Conservation and Development Commission
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CSFM	California State Fire Marshal
CSLC	California State Lands Commission
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DOT	U.S. Department of Transportation
EO	Executive Order
FERC	Federal Energy Regulatory Commission
FR	Federal Register
nm	nautical mile
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
OSPR	Office of Spill Prevention and Response (CDFW)
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

MULTIPLE ENVIRONMENTAL ISSUES

Multiple Environmental Issues (Federal)	
Coastal Zone Management Act (CZMA) (42 USC sec. 4321 et seq.)	The CZMA recognizes a national interest in coastal zone resources and in the importance of balancing competing uses of those resources, giving full consideration to aesthetic, cultural and historic, ecological, recreational, and other values as well as the needs for compatible economic development. Pursuant to the CZMA, coastal states develop and implement comprehensive coastal management programs (CMPs) that describe uses subject to the CMP, authorities and enforceable policies, and coastal zone boundaries, among other elements. The CZMA also gives state coastal management agencies regulatory control (“federal consistency” review authority) over federal activities and federally licensed, permitted or assisted activities, if the activity affects coastal resources; such activities include military projects at coastal locations and outer continental shelf oil and gas leasing, exploration and development. The CCC and BCDC coordinate California’s federally approved CMPs and federal consistency reviews within their respective jurisdictions.
Multiple Environmental Issues (State)	
CEQA (Pub. Resources Code, § 21000 et seq.)	CEQA requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a “project” that must receive some discretionary approval (i.e., the agency has authority to deny the requested permit or approval) which may cause either a direct physical change, or a reasonably foreseeable indirect change, in the environment.
CSLC and the Public Trust Doctrine	The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways, as well as certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6301, 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the Common Law Public Trust. As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State’s sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion. The CSLC’s jurisdiction also includes a 3-nm-wide section of tidal and submerged land adjacent to the coast and offshore islands, including bays, estuaries, and lagoons; the waters and underlying beds of more than 120 rivers, lakes, streams, and sloughs; and 1.3 million acres of “school lands” granted to the State by the Federal government to support public education. The CSLC also has leasing jurisdiction, subject to certain conditions, over mineral extraction from State property owned and managed by other State agencies (Pub. Resources Code, § 68910, subd. (b)), and is responsible for implementing a variety of State regulations for activities affecting these State Trust Lands, including implementation of CEQA.
California Coastal Act (Pub. Resources Code, § 30000 et seq.) CCC Federal Consistency Program	Pursuant to the Coastal Act, the CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. The Coastal Act includes specific policies (see Chapter 3) that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, oil and gas development, transportation, development design, power plants, ports, and public works. Development activities in the coastal zone generally require a coastal permit from either the CCC or the local government: (1) the CCC retains jurisdiction over the immediate shoreline areas below the mean high tide line and offshore areas to the 3 nm State water limit; and (2) following certification of county- and municipality-developed Local Coastal Programs, the CCC has delegated permit authority to many local governments for the portions of their jurisdictions within the coastal zone. The CCC also implements the CZMA as it applies to federal activities (e.g., development projects, permits, and licenses) in the coastal zone by

Multiple Environmental Issues (State)	
	reviewing specified federal actions for consistency with the enforceable policies of Chapter 3 of the Coastal Act.

AESTHETICS / VISUAL RESOURCES

Aesthetics/Visual Resources (State)	
California Scenic Highway Program (Sts. & Hy. Code, § 260 et seq.)	The purpose of California’s Scenic Highway Program, which was created by the Legislature in 1963 and is managed by Caltrans, is to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. State highways identified as scenic, or eligible for designation, are listed in Streets and Highways Code section 260 et seq.
Coastal Act Chapter 3 policies	<i>See Multiple Environmental Issues.</i> The Coastal Act is concerned with protecting the public viewshed, including views from public areas, such as roads, beaches, coastal trails, and access ways. Section 30251 states: Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of the surrounding area, and, where feasible, to restore and enhance visual quality in visually degraded areas.

AGRICULTURE AND FORESTRY RESOURCES

Agriculture and Forestry Resources (Federal)	
Agriculture and Forestry Resources (State)	
There are no major federal or state laws, regulations, and policies potentially applicable to this Project.	

AIR QUALITY

Air Quality (Federal)	
Federal Clean Air Act (FCAA) (42 USC sec. 7401 et seq.)	<p>The FCAA requires the USEPA to identify National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. National standards are established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter (PM₁₀ and PM_{2.5}), and lead. The FCAA mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards; plans must include pollution control measures that demonstrate how the standards would be met. Pursuant to the 1990 FCAA amendments, the USEPA also regulates hazardous air pollutants (HAPs), which are pollutants that result in harmful health effects, but are not specifically addressed through the establishment of NAAQS. HAPs require the use of the maximum or best available control technology to limit emissions. USEPA classifies air basins (or portions thereof) as in “attainment” or “nonattainment” for each criteria air pollutant by comparing monitoring data with State and Federal standards to determine if the NAAQS are achieved. Areas are classified for a pollutant as follows:</p> <ul style="list-style-type: none"> • “Attainment” – the pollutant concentration is lower than the standard. • “Nonattainment” – the pollutant concentration exceeds the standard. • “Unclassified” – there are not enough data available for comparisons. <p>In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO₂) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate greenhouse gas emissions.</p>

Air Quality (State)	
California Clean Air Act of 1988 (CCAA)	The CCAA requires all air districts in the State to endeavor to achieve and maintain State ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter. CARB sets air quality standards for the State at levels to protect public health and welfare with an adequate margin of safety. The California Ambient Air Quality Standards (CAAQS) are generally stricter than national standards for the same pollutants; California also has standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS describe adverse conditions (i.e., pollution levels must be below these standards before a basin can attain the standard). Air quality is considered in “attainment” if pollutant levels are continuously below or equal to the standards and violate the standards no more than once each year. The 1992 CCAA Amendments divide ozone nonattainment areas into four categories of pollutant levels (moderate, serious, severe, and extreme) to which progressively more stringent requirements apply. CARB also regulates toxic air contaminants (pollutants that result in harmful health effects, but are not specifically addressed by air quality standards) through the use of air toxic control measures.
Air Toxics Hot Spots Information and Assessment Act (Health & Saf. Code, § 44300 et seq.)	The Air Toxics Hot Spots Information and Assessment Act provides for the regulation of over 200 toxic air contaminants, including diesel particulate matter. Under the act, local air districts may request that a facility account for its toxic air contaminant emissions. Local air districts then prioritize facilities on the basis of emissions, and high priority designated facilities are required to submit a health risk assessment and communicate the results to the affected public.
Coastal Act Chapter 3 policies	<i>See Multiple Environmental Issues.</i> Section 30253, subdivision (c) requires that new development shall be consistent with requirements imposed by an air pollution control district or CARB as to each particular development.
Other	<ul style="list-style-type: none"> • Health and Safety Code sections 25531-25543 set forth changes in four areas: (1) provides guidelines to identify a more realistic health risk; (2) requires high-risk facilities to submit an air toxic emission reduction plan; (3) holds air pollution control districts accountable for ensuring that plans achieve objectives; and (4) requires high-risk facilities to achieve their planned emission reductions. • Under California’s Diesel Fuel Regulations, diesel fuel used in motor vehicles and harbor craft is limited to 15 parts per million (ppm) sulfur. • CARB’s Heavy Duty Diesel Truck Idling Rule prohibits heavy-duty diesel trucks from idling for longer than 5 minutes at a time (idling for longer than 5 minutes while queuing is allowed if the queue is located more than 100 feet of a home or school). • The Statewide Portable Equipment Registration Program (PERP) establishes a uniform program to regulate portable engines/engine-driven equipment units. Once registered in the PERP, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts.

BIOLOGICAL RESOURCES

Biological Resources (Federal)	
Federal Endangered Species Act (FESA) (7 USC sec. 136, 16 USC sec. 1531 et seq.)	<p>The FESA, which is administered in California by the USFWS and NMFS, provides protection to species listed as threatened or endangered, or proposed for listing as threatened or endangered. When applicants propose projects with a Federal nexus that “may affect” a federally listed or proposed species, the Federal agency must (1) consult with the USFWS or NMFS, as appropriate, under Section 7, and (2) ensure that any actions authorized, funded, or carried out by the agency are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of areas determined to be critical habitat. Section 9 prohibits the “take” of any member of a listed species.</p> <ul style="list-style-type: none"> • Take. “To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Biological Resources (Federal)	
	<ul style="list-style-type: none"> • Harass. “An intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering.” • Harm. “Significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.”
Fish and Wildlife Coordination Act of 1958	This Act requires that whenever a body of water is proposed to be controlled or modified, the lead agency must consult the state and federal agencies responsible for fish and wildlife management (e.g., USFWS, CDFW, and NOAA). The Act allows for recommendations addressing adverse impacts associated with a proposed project, and for mitigating or compensating for impacts on fish and wildlife.
Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 USC sec. 1801 et seq.)	The MSA governs marine fisheries management in Federal waters. The MSA was first enacted in 1976 and amended in 1996. Amendments to the 1996 MSA require the identification of Essential Fish Habitat (EFH) for federally managed species and the implementation of measures to conserve and enhance this habitat. Any project requiring Federal authorization, such as a USACE permit, is required to complete and submit an EFH Assessment with the application and either show that no significant impacts to the essential habitat of managed species are expected or identify mitigations to reduce those impacts. Under the MSA, Congress defined EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 USC sec. 1802(10)). The EFH provisions of the MSA offer resource managers a means to heighten consideration of fish habitat in resource management. Pursuant to section 305(b)(2), federal agencies shall consult with the NMFS regarding any action they authorize, fund, or undertake that might adversely affect EFH.
Marine Mammal Protection Act (MMPA) (16 USC sec. 1361 et seq.)	The MMPA is designed to protect and conserve marine mammals and their habitats. It prohibits takes of all marine mammals in the United States (including territorial seas) with few exceptions. The NMFS may issue a take permit under section 104 if the activities are consistent with the purposes of the MMPA and applicable regulations at 50 CFR, Part 216. The NMFS must also find that the manner of taking is “humane” as defined in the MMPA. If lethal taking of a marine mammal is requested, the applicant must demonstrate that using a non-lethal method is not feasible.
Migratory Bird Treaty Act (MBTA) (16 USC sec. 703-712)	The MBTA was enacted to ensure the protection of shared migratory bird resources. It prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). The USFWS issues permits for takes of migratory birds for activities such as scientific research, education, and depredation control, but does not issue permits for incidental take of migratory birds.
National Invasive Species Act (NISA) (33 CFR, Part 151, Subpart D)	NISA (originally passed in 1990 as the Nonindigenous Aquatic Nuisance Prevention and Control Act [16 USC sec. 4701-4751] and reauthorized, renamed and expanded in 1996) is the U.S.’s chief protection against new aquatic invaders. The Act recognizes the global movement of aquatic species, particularly those that arrive in ballast water, authorized important research, and linked results of the research to decisions to the necessity of further ballast water regulation. Under its provisions, the USCG requires ballast water management (i.e., ballast water exchange) for vessels entering U.S. waters from outside the 200 nm U.S. Exclusive Economic Zone. The original Act was established to: (1) prevent unintentional introduction and dispersal of nonindigenous species into Waters of the United States through ballast water management and other requirements; (2) coordinate and disseminate information on federally conducted, funded, or authorized research, on the prevention and control of the zebra mussel and other aquatic nuisance species; (3) develop and carry out control methods to prevent, monitor, and control unintentional introductions of nonindigenous species from pathways other than ballast water exchange; (4) understand and minimize economic and ecological impacts of established nonindigenous aquatic nuisance species; and (5) establish a program of research and technology development and assistance to states in the management and removal of zebra mussels.

Biological Resources (Federal)	
Federal Executive Orders (EO)	<ul style="list-style-type: none"> • EO 11990 requires federal agencies to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. Each agency, to the extent permitted by law, must (1) avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds there is no practical alternative to such construction or the proposed action includes all practical measures to minimize harm to wetlands that may result from such use; (2) take into account economic, environmental and other pertinent factors in making this finding; and (3) provide opportunity for early public review of any plans or proposals for new construction in wetlands. • EO 13112 requires federal agencies to use authorities to prevent introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and provide for restoration of native species and habitat conditions in invaded ecosystems. The EO establishes the Invasive Species Council, which is responsible for the preparation and issuance of the National Invasive Species Management Plan, which details and recommends performance-oriented goals and objectives and measures of success for federal agencies. • EO 13158 requires federal agencies to (1) identify actions that affect natural or cultural resources that are within an MPA; and (2) in taking such actions, to avoid harm to the natural and cultural resources that are protected by a MPA. • EO 13186 sets forth responsibilities of federal agencies to protect migratory birds.
Other	<ul style="list-style-type: none"> • CWA and Rivers and Harbors Act. (See Hydrology and Water Quality.) • CZMA. (See Multiple Environmental Issues.) • The Bald and Golden Eagle Protection Act makes it illegal to import, export, take, sell, purchase or barter any bald eagle or golden eagle or parts thereof. • The Estuary Protection Act (16 USC sec. 1221-1226) authorizes the Secretary of the Interior to enter into cost-sharing agreements with states and subdivisions for permanent management of estuarine areas in their possession. Federal agencies must assess the impacts of commercial and industrial developments on estuaries.

Biological Resources (State)	
California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.)	<p>The CESA provides for the protection of rare, threatened, and endangered plants and animals, as recognized by the CDFW, and prohibits the taking of such species without its authorization. Furthermore, the CESA provides protection for those species that are designated as candidates for threatened or endangered listings. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened species and endangered species (Fish & G. Code, § 2070). The CDFW also maintains a list of candidate species, which are species that the CDFW has formally noticed as under review for addition to the threatened or endangered species lists. The CDFW also maintains lists of Species of Special Concern that serve as watch lists. Pursuant to CESA requirements, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. The CDFW encourages informal consultation on any proposed project that may affect a candidate species. The CESA also requires a permit to take a State-listed species through incidental or otherwise lawful activities (§ 2081, subd. (b)).</p>
Coastal Act Chapter 3 policies	<p><i>See Multiple Environmental Issues.</i></p> <ul style="list-style-type: none"> • Section 30230. “Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.” • Section 30231. “The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible,

Biological Resources (State)	
	<p>restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.”</p> <ul style="list-style-type: none"> • Section 30232. “Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.” • Section 30240 states: (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.
Marine Invasive Species Act (MISA) (Assembly Bill [AB] 433; Stats. 2003, ch. 491)	<p>Originally passed in 2003 and amended several times, the purpose of MISA is to move towards eliminating the discharge of nonindigenous species into waters of the state or waters that may impact waters of the state, based on the best available technology economically achievable. MISA requires mid-ocean exchange or retention of all ballast water and associated sediments for all vessels 300 gross registered tons or more, U.S. and foreign, carrying ballast water into the waters of the state after operating outside the waters of the State. For all vessels 300 gross register tons or more arriving at a California port or place carrying ballast water from another port or place within the Pacific Coast Region, the Act mandates near-coast exchange or retention of all ballast water. MISA also requires completion and submission of Ballast Water Reporting Form 24 hours in advance of each port of call in California, annual submittal of the Hull Husbandry Reporting Form, the keeping of a ballast management plan and logs, and the application of "Good Housekeeping" Practices designed to minimize the transfer and introduction of invasive species. Compliance with MISA is the responsibility of the vessel owners/operators and not the responsibility of marine terminals.</p>
Marine Life Protection Act (MLPA) (Fish & G. Code, §§ 2850–2863)	<p>Passed in 1999, the MLPA required the CDFW to redesign its system of Marine Protected Areas (MPAs) to increase its coherence and effectiveness at protecting the state's marine life, habitats, and ecosystems. For the purposes of MPA planning, a public-private partnership commonly referred to as the MLPA Initiative was established, and the State was split into five distinct regions (four coastal and the San Francisco Bay) each of which had its own MPA planning process. All four coastal regions have completed these individual planning processes. As a result the coastal portion of California's MPA network is now in effect statewide. Options for a planning process in San Francisco Bay have been developed for consideration at a future date.</p>
Other relevant California Fish and Game Code sections	<ul style="list-style-type: none"> • Sections 900-903 (California Species Preservation Act) provide for the protection and enhancement of amphibians, birds, fish, mammals, and reptiles. • Section 1900 et seq. (California Native Plant Protection Act) is intended to preserve, protect, and enhance endangered or rare native plants in California. This Act includes provisions that prohibit the taking of listed rare or endangered plants from the wild and a salvage requirement for landowners. The Act directs the CDFW to establish criteria for determining what native plants are rare or endangered. Under section 1901, a species is endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes. A species is rare when, although not threatened with immediate extinction, it is in such small numbers throughout its range that it may become endangered. • Sections 3503 & 3503.5 prohibit the taking and possession of native birds’ nests and eggs from all forms of needless take and provide that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nests or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.

Biological Resources (State)	
	<ul style="list-style-type: none"> Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), & 5515 (fish) designate certain species as “fully protected;” such species, or parts thereof, may not be taken or possessed at any time without permission by the CDFW. Section 3513 does not include statutory or regulatory mechanism for obtaining an incidental take permit for the loss of non-game, migratory birds.
Other	<ul style="list-style-type: none"> Lempert-Keene-Seastrand Oil Spill Prevention and Response Act. (<i>See Hazards and Hazardous Materials.</i>) California Aquatic Invasive Species Management Plan, produced by the CDFW, provides a framework for agency coordination and identifies actions to minimize the harmful effects of aquatic invasive species.

CULTURAL AND PALEONTOLOGICAL RESOURCES

Cultural Resources (Federal)	
Archaeological and Historic Preservation Act (AHPA)	The AHPA provides for the preservation of historical and archaeological data that might be irreparably lost or destroyed as a result of (1) flooding, the building of access roads, the erection of workmen’s communities, the relocation of railroads and highways, and other alterations of terrain caused by the construction of a dam by an agency of the U.S. or by any private person or corporation holding a license issued by any such agency; or (2) any alteration of the terrain caused as a result of a federal construction project or federally licensed project, activity, or program. This Act requires federal agencies to notify the Secretary of the Interior when they find that any federally permitted activity or program may cause irreparable loss or destruction of significant scientific, prehistoric, historical, or archaeological data. The AHPA built upon national policy, set out in the Historic Sites Act of 1935, "...to provide for the preservation of historic American sites, buildings, objects, and antiquities of national significance...."
Archaeological Resources Protection Act (ARPA)	<p>The ARPA states that archaeological resources on public or Indian lands are an accessible and irreplaceable part of the nation’s heritage and:</p> <ul style="list-style-type: none"> Establishes protection for archaeological resources to prevent loss and destruction due to uncontrolled excavations and pillaging; Encourages increased cooperation and exchange of information between government authorities, the professional archaeological community, and private individuals having collections of archaeological resources prior to the enactment of this Act; Establishes permit procedures to permit excavation or removal of archaeological resources (and associated activities) located on public or Indian land; and Defines excavation, removal, damage, or other alteration or defacing of archaeological resources as a “prohibited act” and provides for criminal and monetary rewards to be paid to individuals furnishing information leading to the finding of a civil violation or conviction of a criminal violator. <p>ARPA’s enforcement provision provides for criminal and civil penalties against violators of the Act. The ARPA's permitting component allows for recovery of certain artifacts consistent with NPS Federal Archeology Program standards and requirements.</p>
Federal Executive Orders (EO)	<ul style="list-style-type: none"> EO 13007, Indian Sacred Sites, requires federal agencies with administrative or legal responsibility to manage Federal lands to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sites (to the extent practicable permitted by law and not clearly inconsistent with essential agency functions) EO 13158 requires federal agencies to (1) identify actions that affect natural or cultural resources that are within an MPA; and (2) in taking such actions, to avoid harm to the natural and cultural resources that are protected by a MPA.
National Historic Preservation Act	Archaeological resources are protected through the NHPA and its implementing regulation (Protection of Historic Properties; 36 CFR 800), the AHPA, and the ARPA. This Act presents a general policy of supporting and encouraging the preservation of prehistoric and historic

Cultural Resources (Federal)	
(NHPA) (16 USC sec. 470 et seq.) (applies only to Federal undertakings)	resources for present and future generations by directing federal agencies to assume responsibility for considering the historic resources in their activities. The State implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs coordinated by the California Office of Historic Preservation (OHP) in the State Department of Parks and Recreation, which also advises federal agencies regarding potential effects on historic properties. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State’s jurisdictions, including commenting on Federal undertakings. Under the NHPA, historic properties include “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places” (16 U.S.C. 470w [5]).
National Park Service Abandoned Shipwreck Act of 1987 (43 USC sec. 2101–2106).	Under this Act, states have the responsibility for management of living and nonliving resources in State waters and submerged lands, including certain abandoned shipwrecks that have been deserted and to which the owner has relinquished ownership rights with no retention. The NPS has issued guidelines that are intended to: maximize the enhancement of cultural resources; foster a partnership among sport divers, fishermen, archeologists, sailors, and other interests to manage shipwreck resources of the states and the U.S.; facilitate access and utilization by recreational interests; and recognize the interests of individuals and groups engaged in shipwreck discovery and salvage. Specific provisions of the Act’s guidelines include procedures for locating and identifying shipwrecks, methods for determining which shipwrecks are historic, and preservation and long-term management of historic shipwrecks.
Omnibus Public Land Management Act of 2009 - Public Law 111-11 (123 Stat. 991)	Public Law 111-011 at Title VI, subtitle D lays out statutory requirements for Paleontological Resources Preservation (PRP). PRP provides definitions but requires the definition of some terms, and uses other terms and concepts that need further definition or details to clarify intent or enforcement. PRP identifies management requirements, collection requirements, curation requirements, need for both criminal and civil penalties, rewards and forfeiture, and the need for confidentiality of some significant resource locations.
Cultural Resources (State)	
California Register of Historical Resources (CRHR)	<p>The CRHR is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (Pub. Resources Code, § 5024.1, subd. (a)). The criteria for eligibility for the CRHR are modeled after National Register of Historic Places (NRHP) criteria (Pub. Resources Code, § 5024.1(b)) but focus on resources of statewide significance. Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined to be eligible for, or listed in, the NRHP. To be eligible for the CRHR, a prehistoric or historical period property must be significant at the local, State, and/or Federal level under one or more of the following criteria (see State CEQA Guidelines, § 15064.5, subd. (a)(3)):</p> <ul style="list-style-type: none"> • Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage. • Is associated with the lives of persons important in California’s past. • Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. • Has yielded, or may be likely to yield, information important in prehistory or history. <p>A resource eligible for the CRHR must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as an historical resource and to convey the reason for its significance. It is possible that an historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR. Properties listed, or formally designated as eligible for listing, on the National Register are automatically listed on the CRHR, as are certain State Landmarks and Points of Interest. A lead agency is not precluded from determining that the</p>

Cultural Resources (State)	
	resource may be an historical resource as defined in Public Resources Code sections 5020.1, subdivision (j), or 5024.1 (State CEQA Guidelines, § 15064.5, subd. (a)(4)).
CEQA (Pub. Resources Code, § 21000 et seq.)	As CEQA lead agency, the CSLC is responsible for complying with all CEQA and State CEQA Guidelines provisions relating to “historical resources.” A historical resource includes: (1) a resource listed in, or eligible for listing in, the California Register of Historic Resources (CRHR); (2) a resource included in a local register of historical or identified as significant in an historical resource surveys; and (3) any resource that a lead agency determines to be historically significant for the purposes of CEQA, when supported by substantial evidence in light of the whole record.
Coastal Act Chapter 3 policies	<i>See Multiple Environmental Issues.</i> Section 30244 states: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.
Other	<ul style="list-style-type: none"> • Health and Safety Code section 7050.5 states that if human remains are exposed during construction, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code section 5097.998. The Coroner has 24 hours to notify the Native American Heritage Commission (NAHC) if the remains are determined to be of Native American descent. The NAHC will contact most likely descendants, who may recommend how to proceed. • Public Resources Code section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands.” Penal Code section 623 spells out regulations for the protection of caves, including their natural, cultural, and paleontological contents. It specifies that no “material” (including all or any part of any paleontological item) will be removed from any natural geologically formed cavity or cave. • Public Resources Code section 5097.98 states protocol for notifying the most likely descendent from the deceased if human remains are determined to be Native American in origin. It also provides mandated measures for appropriate treatment and disposition of exhumed remains. • Executive Order B-10-11 establishes as state policy that all agencies and departments shall encourage communication and consultation with California Indian Tribes and allow tribal governments to provide meaningful input into proposed decisions and policies that may affect tribal communities.

GEOLOGY AND SOILS

Geology and Soils (State)	
Alquist-Priolo Earthquake Fault Zoning Act (Pub. Resources Code, §§ 2621-2630)	This Act requires that "sufficiently active" and "well-defined" earthquake fault zones be delineated by the State Geologist and prohibits locating structures for human occupancy on active and potentially active surface faults. (Note that since only those potentially active faults that have a relatively high potential for ground rupture are identified as fault zones, not all potentially active faults are zoned under the Alquist-Priolo Earthquake Fault Zone, as designated by the State of California.)
Seismic Hazards Mapping Act & Mapping Regs (Pub. Resources Code, § 2690; Cal. Code Regs., tit. 14, div. 2, ch. 8, art. 10).	These regulations were promulgated for the purpose of promoting public safety by protecting against the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. The Act requires that site-specific geotechnical investigations be conducted identifying the hazard and formulating mitigation measures prior to permitting most developments designed for human occupancy. Special Publication 117, <i>Guidelines for Evaluating and Mitigating Seismic Hazards in California</i> (California Division of Mines and Geology [CDMG] 1997), constitutes the guidelines for evaluating seismic hazards other than surface fault-rupture, and for recommending mitigation measures as required by Public Resources Code section 2695, subdivision (a). The Act does not apply offshore as the California Geological Survey has not zoned offshore California under the Act.

Geology and Soils (State)	
Coastal Act Chapter 3 policies	<i>See Multiple Environmental Issues.</i> With respect to geological resources, Section 30253 requires, in part, that: New development shall: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard; and (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. Section 30243 also states in part that the long-term productivity of soils and timberlands shall be protected.

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Greenhouse Gas Emissions and Climate Change (Federal & International)	
Federal Clean Air Act (FCAA) (42 USC sec. 7401 et seq.)	In 2007, the U.S. Supreme Court ruled that carbon dioxide (CO ₂) is an air pollutant as defined under the FCAA, and that the USEPA has authority to regulate GHG emissions.
Mandatory Greenhouse Gas Reporting (74 FR 56260)	On September 22, 2009, the USEPA issued the Mandatory Reporting of Greenhouse Gases Rule, which requires reporting of GHG data and other relevant information from large sources and suppliers in the U.S. The purpose of the Rule is to collect accurate and timely GHG data to inform future policy decisions. The Rule is referred to as 40 CFR Part 98 (Part 98). Implementation of Part 98 is referred to as the GHG Reporting Program (GHGRP). The gases covered by the GHGRP are CO ₂ , methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and other fluorinated gases including nitrogen trifluoride and hydrofluorinated ethers.
Kyoto Protocol	On March 21, 1994, the Kyoto Protocol was signed. The Kyoto Protocol was a treaty made under the United Nations Framework Convention on Climate Change, and was the first international agreement to regulate GHG emissions. If the commitments outlined in the Kyoto Protocol are met, global GHG emissions would be reduced by 5 percent from 1990 levels during the commitment period of 2008 to 2012. Although the U.S. is a signatory to the Kyoto Protocol, Congress has not ratified it, therefore the U.S. is not bound by the Protocol's commitments.
Paris Climate Agreement	In December 2015, the Paris Climate Agreement (Agreement) was endorsed and adopted by 195 countries. The overarching goal was to reduce pollution levels so that the rise in global temperatures is limited to no more than 2 °C (3.6 °F). The Agreement also contains language urging that the increase be limited even further to 1.5 °C (2.7 °F), if possible. The Agreement includes voluntary commitments from 186 of the 195 signatories, including the U.S., to cut or limit the growth of their GHG emissions. The signatories agreed to convene every 5 years to take stock, revisit their pledges, and steadily increase them to achieve the 2 °C goal. The new agreement also requires regular and transparent reporting of every country's carbon reductions.

Greenhouse Gas Emissions and Climate Change (State)	
California Global Warming Solutions Act of 2006 (AB 32, Stats. 2006, ch. 488)	Under AB 32, CARB is responsible for monitoring and reducing GHG emissions in the State and for establishing a statewide GHG emissions cap for 2020 that is based on 1990 emissions levels. CARB (2009) has adopted the AB 32 Climate Change Scoping Plan (Scoping Plan), which contains the main strategies for California to implement to reduce CO ₂ equivalent (CO ₂ e) emissions by 169 million metric tons (MMT) from the State's projected 2020 emissions level of 596 MMT CO ₂ e under a business-as-usual scenario. The Scoping Plan breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the State's GHG inventory, but does not directly discuss GHG emissions generated by construction activities.
AB 197 (Stats. 2016, ch. 250)	AB 197 creates the Joint Legislative Committee on Climate Change Policies; requires CARB to prioritize direct emission reductions and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; requires CARB to prepare reports on sources of GHGs and other pollutants, update the reports at least annually, and make the reports

Greenhouse Gas Emissions and Climate Change (State)	
	available on its Internet website; establishes six-year terms for voting members of CARB; and adds two legislators as non-voting members of CARB.
AB 1493 (Stats. 2002, ch. 200)	In 2002, with the passage of AB 1493, California launched an innovative and proactive approach to dealing with GHG emissions and climate change at the state level. AB 1493 requires CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobile and light trucks beginning with the model year 2009. Although litigation challenged these regulations and the USEPA initially denied California's related request for a waiver, the waiver request was granted (USEPA 2010c).
SB 32 (Stats. 2016, ch. 249)	AB 32 required CARB to approve a statewide GHG emissions limit equivalent to the statewide GHG emissions level in 1990 to be achieved by 2020. This bill requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030.
SB 97 (Stats. 2007, ch. 185)	Pursuant to SB 97, the State Office of Planning and Research prepared and the Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. Effective as of March 2010, the revisions to the CEQA Environmental Checklist Form (Appendix G) and the Energy Conservation Appendix (Appendix F) provide a framework to address global climate change impacts in the CEQA process; State CEQA Guidelines section 15064.4 was also added to provide an approach to assessing impacts from GHGs.
SB 350 (Stats. 2015, ch. 547)	The 2015 Clean Energy and Pollution Reduction Act was signed into law on October 10, 2015, and requires that the amount of electricity generated and sold to retail customers from renewable energy resources be increased to 50 percent by December 31, 2030, and that a doubling of statewide energy efficiency savings in electricity and natural gas by retail customers be achieved by January 1, 2030.
SB 375 (Stats. 2008, ch. 728)	SB 375 (effective January 1, 2009) requires CARB to develop regional reduction targets for GHG emissions, and prompted the creation of regional land use and transportation plans to reduce emissions from passenger vehicle use throughout the State. The targets apply to the regions covered by California's 18 metropolitan planning organizations (MPOs). The 18 MPOs must develop regional land use and transportation plans and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035.
State Executive Orders (EOs)	<ul style="list-style-type: none"> • EO B-30-15 (Governor Brown, April 2015) established a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target to reduce GHG emissions to 80 percent below 1990 levels by 2050. State agencies with jurisdiction over sources of GHG emissions to implement measures were also directed pursuant to statutory authority, to achieve GHG emissions reductions to meet the 2030 and 2050 targets. • EO S-01-07 (Governor Schwarzenegger, January 2007) set a low carbon fuel standard for California, and directed the carbon intensity of California's transportations fuels to be reduced by at least 10 percent by 2020. • EO S-3-05 (Governor Schwarzenegger, June 2005) directed the state to reduce GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 level by 2050.

HAZARDS AND HAZARDOUS MATERIALS

Hazards and Hazardous Materials (Federal)	
California Toxics Rule (40 CFR 131)	In 2000, the USEPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards provisions to be applied to waters in California to protect human health and the environment. Under CWA section 303(c)(2)(B), the USEPA requires states to adopt numeric water quality criteria for priority toxic pollutants for which the USEPA has issued criteria guidance, and the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses. These Federal criteria are legally applicable in California for inland surface waters, enclosed bays, and estuaries.

Hazards and Hazardous Materials (Federal)	
Hazardous Liquid Pipeline Safety Act of 1979	This Act includes requirements for hazardous liquid pipelines, which fall under the jurisdiction of the DOT, including accident reporting, design, and construction requirements, and minimum requirements for hydrostatic testing, compliance dates, test pressures, and duration; and records.
National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR 300)	Authorized under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA: 42 USC sec. 9605), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA: Pub. L. 99-499); and by CWA section 311(d), as amended by the OPA (Pub. L. 101-380), the NCP outlines requirements for responding to oil spills and hazardous substance releases. It specifies compliance, but does not require preparation of a written plan, and provides a comprehensive system for reporting, spill containment, and cleanup. Per 40 CFR 300.175 and 40 CFR 300.120, the USCG has responsibility for oversight of regional response for oil spills in “coastal zones.”
Oil Pollution Act (OPA) of 1990 (33 USC sec. 2712)	The OPA requires owners and operators of facilities that could cause substantial harm to the environment to prepare and submit, and maintain up-to-date, plans for responding to worst-case discharges of oil and hazardous substances and for facilities and vessels to demonstrate that they have sufficient response equipment under contract to respond to and clean up a worst-case spill. The passage of the OPA motivated California to pass a more stringent spill response and recovery regulation and the creation of the OSPR to review and regulate oil spill plans and contracts. The OPA includes provisions to expand prevention and preparedness activities, improve response capabilities, provide funding for natural resource damage assessments, ensure that shippers and oil companies pay the costs of spills that do occur, and establish an expanded research and development program. Pursuant to a Memorandum of Understanding established to divide areas of responsibility, the USCG is responsible for tank vessels and marine terminals, the USEPA for tank farms, and the Research and Special Programs Administration for pipelines; each of these agencies has developed regulations for its area of responsibility. In addition, the Secretary of Interior is responsible for spill prevention, oil-spill contingency plans, oil-spill containment and clean-up equipment, financial responsibility certification, and civil penalties for offshore facilities and associated pipelines in all federal and State waters.
Resource Conservation and Recovery Act (RCRA) (42 USC sec. 6901 et seq.)	The RCRA authorizes the USEPA to control hazardous waste from “cradle-to-grave” (generation, transportation, treatment, storage, and disposal). RCRA’s Federal Hazardous and Solid Waste Amendments from 1984 include waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. The Department of Toxic Substances Control is the lead State agency for corrective action associated with RCRA facility investigations and remediation.
Toxic Substances Control Act (TSCA) (15 USC sec. 2601–2692)	The TSCA authorizes the USEPA to require reporting, record-keeping, testing requirements, and restrictions related to chemical substances and/or mixtures. It also addresses production, importation, use, and disposal of specific chemicals, such as polychlorinated biphenyls (PCBs), asbestos-containing materials, lead-based paint, and petroleum.
Other Relevant Laws, Regulations, and Recognized National Codes and Standards	<ul style="list-style-type: none"> • CWA. (See Hydrology and Water Quality.) • Hazardous Materials Transportation Act. (<i>See Transportation/Traffic.</i>) • 33 CFR, Navigation and Navigable Waters, regulates aids to navigation, vessel operations, anchorages, bridges, security of vessels, waterfront facilities, marine pollution financial responsibility and compensation, prevention and control of releases of materials (including oil spills) from vessels, ports and waterways safety, boating safety, and deep-water ports. The USEPA is responsible for the National Contingency Plan and for developing regulations for SPCC plans and regulates disposal of recovered oil. • 40 CFR Parts 109, 110, 112, 113, and 114. The Spill Prevention Countermeasures and Control (SPCC) plans covered in these regulatory programs apply to oil storage and transportation facilities and terminals, tank farms, bulk plants, oil refineries, and production facilities, and bulk oil consumers (e.g., apartment houses, office buildings, schools, hospitals, government facilities). These regulations include minimum criteria for developing oil-removal contingency plans, prohibit discharge of oil such that applicable water quality standards would be violated, and address oil spill prevention and preparation of SPCC plans. They also establish financial liability limits and provide civil penalties for violations of the oil spill regulations.

Hazards and Hazardous Materials (Federal)	
	<ul style="list-style-type: none"> • 46 CFR parts 1 through 599 and Inspection and Regulation of Vessels (46 USC Subtitle II Part B) provide that all vessels operating offshore, including those under foreign registration, are subject to requirements applicable to vessel construction, condition, and operation. All vessels (including motorboats) operating in commercial service (e.g., passengers for hire, transport of cargoes, hazardous materials, and bulk solids) on specified routes (inland, near coastal, and oceans) are subject to requirements applicable to vessel construction, condition, and operation. These regulations also allow for inspections to verify that vessels comply with applicable international conventions and U.S. laws and regulations. • Act of 1980 to Prevent Pollution from Ships requires ships in U.S. waters, and U.S. ships wherever located, to comply with International Convention for the Prevention of Pollution from Ships (MARPOL). • Convention on the International Regulations for Preventing Collisions at Sea establish “rules of the road” such as rights-of-way, safe speed, actions to avoid collision, and procedures to observe in narrow channels and restricted visibility. • Fire and Explosion Prevention and Control, National Fire Protection Agency (NFPA) Standards. • Safety and Corrosion Prevention Requirements — ASME, National Association of Corrosion Engineers (NACE), ANSI <ul style="list-style-type: none"> ◦ ASME & ANSI B16.1 Cast Iron Pipe Flanges and Flanged Fittings; ◦ ASME & ANSI B16.9, Factory-Made Wrought Steel Butt Welding Fittings; ◦ ASME & ANSI B31.1a, Power Piping; ◦ ASME & ANSI B31.4a, addenda to ASME B31.4a-1989 Edition, Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols; ◦ NACE Standard RP0190-95, Item No. 53071. Standard Recommended Practice External Protective Coatings for Joints, Fittings, and Valves on Metallic Underground or Submerged Pipelines and Piping Systems; and ◦ NACE Standard RP0169-96, Item No. 53002. Standard Recommended Practice Control of External Corrosion on Underground or Submerged Metallic Piping Systems.

Hazards and Hazardous Materials (State)	
Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (OSPRA; Gov. Code, § 8670.1 et seq., Pub. Resources Code, § 8750 et seq., and Rev. & Tax. Code, § 46001 et seq.)	The OSPRA and its implementing regulations seek to protect State waters from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill. The Act requires applicable operators to prepare and implement marine oil spill contingency plans and to demonstrate financial responsibility, and requires immediate cleanup of spills, following the approved contingency plans, and fully mitigating impacts on wildlife. The Act assigns primary authority to OSPR within the CDFW to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the State; the CSLC is also provided with authority for oil spill prevention from and inspection of marine facilities and assists OSPR with spill investigations and response. Notification is required to the Governor’s State Office of Emergency Services, which in turn notifies the response agencies, of all oil spills in the marine environment, regardless of size. The Act also created the Oil Spill Prevention and Administration Fund and the Oil Spill Response Trust Fund. Pipeline operators pay fees into the first of these funds for pipelines transporting oil into the State across, under, or through marine waters.
Elder California Pipeline Safety Act of 1981 (Gov. Code, §§ 51010-51018) & California Code of Regulations,	The California Pipeline Safety Act gives regulatory jurisdiction to the California State Fire Marshal (CSFM) for the safety of all intrastate hazardous liquid pipelines and all interstate pipelines used for the transportation of hazardous or highly volatile liquid substances. The law establishes the governing rules for interstate pipelines to be the Federal Hazardous Liquid Pipeline Safety Act and Federal pipeline safety regulations. Government Code sections 51010 through 51018 provide specific safety requirements that are more stringent than the Federal rules, including periodic hydrostatic testing of pipelines, pipeline leak detection, and a requirement that all leaks be reported. Recent amendments require that pipelines include leak prevention and cathodic protection, with acceptability to be determined by the CSFM. All new

Hazards and Hazardous Materials (State)	
title 19, Public Safety	<p>pipelines must be designed to accommodate the passage of instrumented inspection devices (i.e., smart pigs).</p> <p>Under California Code of Regulations, title 19, Public Safety, the CSFM develops regulations relating to fire and life safety. These regulations have been prepared and adopted to establish minimum standards for the prevention of fire and for protection of life and property against fire, explosion, and panic. The CSFM also adopts and administers the regulations and standards considered necessary under the California Health and Safety Code to protect life and property.</p>
Oil Pipeline Environmental Responsibility Act (Assembly Bill [AB] 1868)	<p>This Act requires every pipeline corporation qualifying as a public utility and transporting crude oil in a public utility oil pipeline system to be held strictly liable for any damages incurred by “any injured party which arise out of, or caused by, the discharge or leaking of crude oil or any fraction thereof...” The law applies only to public utility pipelines for which construction would be completed after January 1, 1996, or that part of an existing utility pipeline that is being relocated after the above date and is more than 3 miles in length.</p>
Clean Coast Act of 2005 (SB 771)	<p>This Act, which went into effect January 1, 2006, includes requirements to reduce pollution of California waters from large vessels, such as by: prohibiting discharges of hazardous wastes, other wastes, or oily bilge water into California waters or a marine sanctuary; prohibiting discharges of grey water and sewage into California waters from vessels with sufficient holding-tank capacity or vessels capable of discharging grey water and/or sewage to available shore-side reception facilities; and requiring reports of prohibited discharges to the State Water Resources Control Board (SWRCB).</p>
Coastal Act Chapter 3 policies	<p><i>See Multiple Environmental Issues.</i> Section 30232 of the Coastal Act addresses hazardous materials spills and states that “Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.”</p>
Other	<ul style="list-style-type: none"> • California Code of Regulations, title 22, division 4.5 regulates hazardous wastes and materials by the implementation of a Unified Program to ensure consistency throughout the state in administration requirements, permits, inspections, and enforcement through a Certified Unified Program Agency (CUPA). • Fire Code regulations (Cal. Code Regs, tit 24, part 9) state hazardous materials should be used and storage in compliance with the state fire codes. • Harbors and Navigation Code specifies a State policy to “promote safety for persons and property in and connected with the use and equipment of vessels,” and includes laws concerning marine navigation that are implemented by local city and county governments. This Code also regulates discharges from vessels within territorial waters of the State of California to prevent adverse impacts on the marine environment. This Code regulates oil discharges and imposes civil penalties and liability for cleanup costs when oil is intentionally or negligently discharged to the State waters. • Hazardous Material Release Response Plans and Inventory Law (Health & Saf. Code, ch. 6.95) is designed to reduce the occurrence and severity of hazardous materials releases. This State law requires businesses to develop a Release Response Plan for hazardous materials emergencies if they handle more than 500 pounds, 55 gallons, or 200 cubic feet of hazardous materials. In addition, the business must prepare a Hazardous Materials Inventory of all hazardous materials stored or handled at the facility over the above thresholds, and all hazardous materials must be stored in a safe manner. • Hazardous Waste Control Act (Cal. Code Regs., tit. 26) defines requirements for proper management of hazardous materials. • Hazardous Waste Control Law (Health & Saf. Code, Ch. 6.5 & Cal. Code Regs., tit. 22 and 26) establishes criteria for defining hazardous waste and its safe handling, storage, treatment, and disposal. The law is designed to provide cradle-to-grave management of hazardous wastes and reduce the occurrence and severity of hazardous materials releases. • Health and Safety Code titles 22 and 26: regulate the management of hazardous materials • Porter-Cologne Water Quality Control Act. (<i>See Hydrology and Water Quality.</i>)

Hazards and Hazardous Materials (State)	
	<ul style="list-style-type: none"> Seismic Hazards Mapping Act and Seismic Hazards Mapping Regulations. (<i>See Geology and Soils.</i>)

HYDROLOGY AND WATER QUALITY

Hydrology and Water Quality (Federal)	
Federal Clean Water Act (33 USC sec. 1251 et seq.)	<p>The CWA is comprehensive legislation (it generally includes reference to the Federal Water Pollution Control Act of 1972, its supplementation by the CWA of 1977, and amendments in 1981, 1987, and 1993) that seeks to protect the nation’s water from pollution by setting water quality standards for surface water and by limiting the discharge of effluents into waters of the U.S. These water quality standards are promulgated by the USEPA and enforced in California by the SWRCB and nine RWQCBs. CWA sections include:</p> <ul style="list-style-type: none"> <u>Section 401 (33 USC sec. 1341)</u> specifies that any applicant for a federal permit or license to conduct any activity which may result in any discharge into the navigable waters of the United States to obtain a certification or waiver thereof from the state in which the discharge originates that such a discharge will comply with established state effluent limitations and water quality standards. USACE projects are required to obtain this certification. <u>Section 402 (33 USC sec. 1342)</u> establishes conditions and permitting for discharges of pollutants under the National Pollution Discharge Elimination System) (NPDES). Under the NPDES Program, states establish standards specific to water bodies and designate the types of pollutants to be regulated, including total suspended solids and oil; all point sources that discharge directly into waterways are required to obtain a permit regulating their discharge. NPDES permits fall under the jurisdiction of the SWRCB or RWQCBs when the discharge occurs within California’s territorial limit (out to 3 nm). <u>Section 404 (33 USC sec. 1344)</u> authorizes the USACE to issue permits for the discharge of dredged or fill material into waters of the United States, including wetlands, streams, rivers, lakes, coastal waters or other water bodies or aquatic areas that qualify as waters of the United States.
Rivers and Harbors Act (33 USC sec. 401)	<p>This Act governs specified activities in “navigable waters” (waters subject to the ebb and flow of the tide or that are presently used, have been used in the past, or may be susceptible for use to transport interstate or foreign commerce). Specifically, it limits the construction of structures and the discharge of fill into navigable waters of the U.S. Under Section 10, the following activities require approval from the USACE or authorization from the Secretary of War:</p> <ul style="list-style-type: none"> building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, or navigable river; excavation or fill in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of any channel of any navigable waters of the U.S.
Other	<ul style="list-style-type: none"> Oil Pollution Act (OPA). (<i>See Hazards and Hazardous Materials.</i>) The Marine Plastic Pollution Research and Control Act prohibits the discharge of plastic, garbage, and floating wood scraps within 3 nm of land. Beyond 3 nm, garbage must be ground to less than one inch, but discharge of plastic and floating wood scraps is still restricted. This Act requires manned offshore platforms, drilling rigs, and support vessels operating under a Federal oil and gas lease to develop waste management plans. Navigation and Navigable Waters (33 CFR) regulations include requirements pertaining to prevention and control of releases of materials from vessels (e.g., oil spills), traffic control, and restricted areas, and general ports and waterways safety.

Hydrology and Water Quality (State)	
Porter-Cologne Water Quality Control Act	Porter-Cologne is the principal law governing water quality in California. The Act established the SWRCB and nine RWQCBs, which have primary responsibility for protecting State water quality and the beneficial uses of State waters. Porter-Cologne also implements many

Hydrology and Water Quality (State)	
(Wat. Code, § 13000 et seq.) (Porter-Cologne)	<p>provisions of the federal CWA, such as the NPDES permitting program. Pursuant to CWA section 401, applicants for a federal license or permit for activities that may result in any discharge to waters of the United States must seek a Water Quality Certification from the State in which the discharge originates; such Certification is based on a finding that the discharge will meet water quality standards and other appropriate requirements of State law. In California, RWQCBs issue or deny certification for discharges within their jurisdiction. The SWRCB has this responsibility where projects or activities affect waters in more than one RWQCB's jurisdiction. If the SWRCB or a RWQCB imposes a condition on its Certification, those conditions must be included in the federal permit or license. Plans that contain enforceable standards for the various waters they address include the following:</p> <ul style="list-style-type: none"> • <u>Basin Plan</u>. Porter-Cologne (see § 13240) requires each RWQCB to formulate and adopt a Basin Plan for all areas within the region. Each RWQCB must establish water quality objectives to ensure the reasonable protection of beneficial uses, and an implementation program for achieving water quality objectives within the basin plan. In California, the beneficial uses and water quality objectives are the State's water quality standards. • The <u>California Ocean Plan</u> (see § 13170.2) establishes water quality objectives for California's ocean waters and provides the basis for regulating wastes discharged into ocean and coastal waters. The plan applies to point and non-point sources. In addition, the Ocean Plan identifies applicable beneficial uses of marine waters and sets narrative and numerical water quality objectives to protect beneficial uses. The SWRCB first adopted this plan in 1972, and it reviews the plan at least every 3 years to ensure that current standards are adequate and are not allowing degradation to indigenous marine species or posing a threat to human health. • <u>Other water quality control plans</u> include: Water Quality Control Plan for Enclosed Bays and Estuaries of California; Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan); and San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan. <p>RWQCBs also oversee on-site treatment of "California Designated, Non-Hazardous Waste" and enforces water quality thresholds and standards set forth in the Basin Plan. Applicants may be required to obtain a General Construction Activities Storm Water Permit under the NPDES program, and develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that includes best management practices (BMPs) to control erosion, siltation, turbidity, and other contaminants associated with construction activities. The SWPPP would include BMPs to control or prevent the release of non-storm water discharges, such as crude oil, in storm water runoff.</p>
Coastal Act Chapter 3 policies	<p><i>See Multiple Environmental Issues.</i> Section 30231 states that the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.</p>
Fish and Game Code sections 1601 to 1603	<p>Under these sections, CDFW must be notified prior to any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. The term "stream" can include perennial, intermittent, and ephemeral streams; rivers; creeks; dry washes; sloughs; and watercourses with subsurface flows.</p>
Harbors and Navigation Code sections 650-674	<p>This code specifies a State policy to "promote safety for persons and property in and connected with the use and equipment of vessels," and includes laws concerning marine navigation that are implemented by local city and county governments. This Code also regulates discharges from vessels within territorial waters of the State of California to prevent adverse impacts on the marine environment. This code regulates oil discharges and imposes civil penalties and</p>

Hydrology and Water Quality (State)	
	liability for cleanup costs when oil is intentionally or negligently discharged to the waters of the State of California.
Other sections	<ul style="list-style-type: none"> • Clean Coast Act of 2005. (See Hazards and Hazardous Materials) • Water Code section 8710 requires that a reclamation board permit be obtained prior to the start of any work, including excavation and construction activities, if projects are located within floodways or levee sections. Structures for human habitation are not permitted within designated floodways. • Water Code section 13142.5 provides marine water quality policies stating that wastewater discharges shall be treated to protect present and future beneficial uses, and, where feasible, to restore past beneficial uses of the receiving waters. The highest priority is given to improving or eliminating discharges that adversely affect wetlands, estuaries, and other biologically sensitive sites; areas important for water contact sports; areas that produce shellfish for human consumption; and ocean areas subject to massive waste discharge.

LAND USE AND PLANNING

See also Multiple Environmental Issues for laws, regulations, and policies related to land use and planning.

Land Use and Planning (Federal)
There are no major federal laws, regulations, and policies potentially applicable to this Project.

Land Use and Planning (State)	
Coastal Act Chapter 3 policies	<p><i>See Multiple Environmental Issues.</i></p> <ul style="list-style-type: none"> • Section 30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses. • Section 30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area. • Section 30222. The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry. • Section 30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible. • Section 30224. Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.
Submerged Lands Act	The State of California owns tide and submerged lands waterward of the ordinary high watermark. State law gives primary responsibility for determination of the precise boundary between these public tidelands and private lands, and administrative responsibility over state tidelands, to the CSLC. Access and use of state shoreline areas can be obtained through purchase or lease agreements.

MINERAL RESOURCES

Mineral Resources (Federal)	
CFR, Titles 10, 18, and 30	<ul style="list-style-type: none"> • 10 CFR addresses energy consumption and the Department of Energy. • 18 CFR addresses the Federal Energy Regulatory Commission (FERC). • 30 CFR establishes the Bureau of Ocean Energy Management (BOEM, formerly the MMS), which manages energy resources in the Federal OCS.
Mineral Resources (State)	
Surface Mining and Reclamation Act (SMARA) (Pub. Resources Code, §§ 2710-2796).	<p>The California Department of Conservation is the primary agency with regard to mineral resource protection. The Department, which is charged with conserving earth resources (Pub. Resources Code, §§ 600-690), has five program divisions: California Geological Survey (CGS); Division of Oil, Gas, and Geothermal Resources; Division of Land Resource Protection; State Mining and Geology Board (SMGB); and Office of Mine Reclamation. SMGB develops policy direction regarding the development and conservation of mineral resources and reclamation of mined lands. In accordance with SMARA, CGS classifies the regional significance of mineral resources and assists in designating lands containing significant aggregate resources. Four Mineral Resource Zones (MRZs) are designated to indicate the significance of mineral deposits.</p> <ul style="list-style-type: none"> • MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. • MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence. • MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data. • MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.
Other	<ul style="list-style-type: none"> • Public Resources Code section 6801 (Oil and Gas and Mineral Leases) • Warren-Alquist Act, adopted in 1974 to encourage conservation of non-renewable energy resources.

NOISE

Noise (Federal)	
Noise Control Act (42 USC sec. 4910)	This Act required the USEPA to establish noise emission criteria, as well as noise testing methods (40 CFR Chapter 1, Subpart Q). These criteria generally apply to interstate rail carriers and to some types of construction and transportation equipment. The USEPA published a guideline (USEPA 1974) containing recommendations for acceptable noise level limits affecting residential land use of 55 dBA L_{dn} for outdoors and 45 dBA L_{dn} for indoors.
NTIS 550/9-74-004, 1974	In response to a Federal mandate, the USEPA provided guidance in NTIS 550/9-74-004, 1974 (“Information on Levels of Environmental Noise Requisite to Protect Health and Welfare with an Adequate Margin of Safety”), commonly referenced as the “Levels Document” that establishes an L_{dn} of 55 dBA as the requisite level, with an adequate margin of safety, for areas of outdoor uses including residences and recreation areas. The USEPA recommendations contain a factor of safety and do not consider technical or economic feasibility (i.e., the document identifies safe levels of environmental noise exposure without consideration for achieving these levels or other potentially relevant considerations), and therefore should not be construed as standards or regulations.

Noise (State)	
Land Use Compatibility Guidelines from the now defunct California Office of Noise Control	<p>State regulations for limiting population exposure to physically and/or psychologically significant noise levels include established guidelines and ordinances for roadway and aviation noise under Caltrans and the now defunct California Office of Noise Control. Office of Noise Control land use compatibility guidelines provided the following:</p> <ul style="list-style-type: none"> • For residences, an exterior noise level of 60 to 65 dBA Community Noise Equivalent Level (CNEL) is considered "normally acceptable;" a noise level of greater than 75 dBA CNEL is considered "clearly unacceptable." • A noise level of 70 dBA CNEL is considered "conditionally acceptable" (i.e., the upper limit of "normally acceptable" for sensitive uses [schools, libraries, hospitals, nursing homes, churches, parks, offices, commercial/professional businesses]).
Other	<ul style="list-style-type: none"> • California Administrative Code, title 2, establishes CNEL 45 dBA as the maximum allowable indoor noise level resulting from exterior noise sources for multi-family residences. • California Administrative Code, title 4, which applies to airports operating under permit from the Caltrans Division of Aeronautics, defines a noise-impacted zone as any residential or other noise-sensitive use with CNEL 65 and above.

POPULATION AND HOUSING

Population and Housing (Federal)
Population and Housing (State)
There are no major federal or state laws, regulations, and policies potentially applicable to this Project.

PUBLIC SERVICES

Public Services (Federal)	
CFR Title 29	<ul style="list-style-type: none"> • Under 29 CFR 1910.38, when required by an Occupational Safety and Health Administration (OSHA) standard, an employer must have an Emergency Action Plan that must be in writing, kept in the workplace, and available to employees for review. An employer with 10 or fewer employees may communicate the plan orally to employees. Minimum elements of an emergency action plan include the following procedures: Reporting a fire or other emergency; emergency evacuation, including type of evacuation and exit route assignments; employees who remain to operate critical plant operations before they evacuate; account for all employees after evacuation; and employees performing rescue or medical duties • Under 29 CFR 1910.39, an employer must have a Fire Prevention Plan (FPP). A FPP must be in writing, be kept in the workplace, and be made available to employees for review; an employer with 10 or fewer employees may communicate the plan orally to employees. • Under 29 CFR 1910.155, Subpart L, Fire Protection, employers are required to place and keep in proper working order fire safety equipment within facilities.
Public Services (State)	
California Code of Regulations, title 19 (Public Safety)	<p>Under this section, the CSFM develops regulations relating to fire and life safety. These regulations have been prepared and adopted to establish minimum standards for the prevention of fire and for protection of life and property against fire, explosion, and panic. The CSFM also adopts and administers regulations and standards necessary under the California Health and Safety Code to protect life and property.</p>

RECREATION

Recreation (Federal)	
There are no major federal laws, regulations, and policies potentially applicable to this Project.	
Recreation (State)	
Coastal Act Chapter 3 policies	<p>See Multiple Environmental Issues.</p> <ul style="list-style-type: none"> Section 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. Section 30220: Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

TRANSPORTATION / TRAFFIC

Transportation / Traffic (Federal)	
Ports and Waterways Safety Act	This Act provides the authority for the USCG to increase vessel safety and protect the marine environment in ports, harbors, waterfront areas, and navigable waters, including by authorizing the Vessel Traffic Service, controlling vessel movement, and establishing requirements for vessel operation.
Transportation / Traffic (State)	
California Vehicle Code	Chapter 2, article 3 defines the powers and duties of the California Highway Patrol, which enforces vehicle operation and highway use in the State.
Caltrans	Caltrans is responsible for the design, construction, maintenance, and operation of the California State Highway System and the portion of the Interstate Highway System within State boundaries. Chapter 2, article 3 of the Vehicle Code defines the powers and duties of the California Highway Patrol, which has enforcement responsibilities for the vehicle operation and highway use in the State.

TRIBAL CULTURAL RESOURCES

Tribal Cultural Resources (Federal)	
See Cultural and Paleontological Resources.	
Tribal Cultural Resources (State)	
See Cultural and Paleontological Resources.	
AB 52 (Gatto, Stats. 2014, Ch. 532)	AB 52 (effective July 1, 2015) adds sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to CEQA, relating to consultation with California Native American tribes, consideration of tribal cultural resources, and confidentiality. The definition of tribal cultural resources considers tribal cultural values in addition to scientific and archaeological values when determining impacts and mitigation. AB 52 provides procedural and substantive requirements for lead agency consultation with California Native American tribes and consideration of effects on tribal cultural resources, as well as examples of mitigation measures to avoid or minimize impacts to tribal cultural resources. AB 52 establishes that if a project may cause a substantial adverse change in the significance of a tribal cultural resource, that project may have a significant effect on the environment. Lead agencies must avoid damaging effects to tribal cultural resources, when feasible, and shall keep information submitted by tribes confidential.

UTILITIES AND SERVICE SYSTEMS

Utilities and Service Systems (Federal)	
CFR Title 29	<i>See Public Services.</i>

Utilities and Service Systems (State)	
There are no major state laws, regulations, and policies potentially applicable to this Project.	

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Socioeconomics and Environmental Justice (Federal)	
Executive Order (EO) 12898	In 1994, President Clinton issued an “Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (EO 12898). This EO was designed to focus attention on environmental and human health conditions in areas of high minority populations and low-income communities, and promote non-discrimination in programs and projects substantially affecting human health and the environment (White House 1994). The EO requires Federal agencies (as well as State agencies receiving Federal funds) to identify and address any disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations.

Socioeconomics and Environmental Justice (State)	
CSLC	In 2002, the CSLC adopted an Environmental Justice Policy to ensure consideration of environmental justice as part of the CSLC’s processes, decisions, and programs (Calendar Item 63, April 9, 2002). The policy stresses equitable treatment of all members of the public and commits to consider environmental justice in its processes, decision-making, and regulatory affairs. CSLC staff implements the Policy, in part, through identification of and communication with relevant populations that could be adversely and disproportionately affected by CSLC projects or programs, and by ensuring that a range of reasonable alternatives is identified that would minimize or eliminate environmental issues affecting such populations.